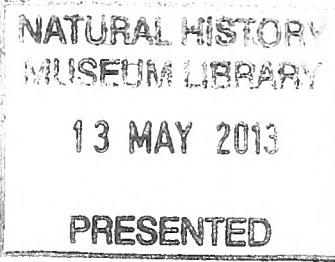


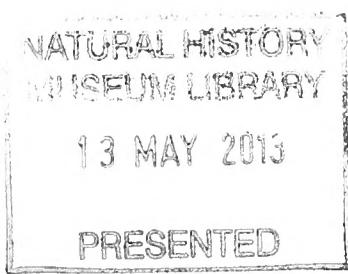
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JOURNAL
2012

April 2013

EDINBURGH NATURAL HISTORY SOCIETY



COUNCIL at JANUARY 2013

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The Edinburgh Natural History Society was founded in 1869 and incorporates the Edinburgh Field Naturalists and Microscopical Society instituted in 1881. The Society was instituted for the study of natural history in all its branches and for the encouragement of public interest and concern in these matters.

Outdoor excursions are held throughout the year.

An indoor talk is held once a month on a Wednesday from September to April, in the Guide Hall, 33 Melville Street at 7.30pm. All are welcome.

A copy of the programme for Summer 2013, and details of membership of the Society can be obtained from our website at edinburghnaturalhistorysociety.org.uk

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OBITUARIES

Mary Robertson

We are sad to hear of the death of Mary Robertson, one of our oldest members, who died on 24th January 2013, just four days before her 92nd birthday. She was a very active member of the Nats for over thirty years, serving on the Council and as chairman of the Excursion Committee.

She had a great love of the countryside, having been brought up on a farm in Yorkshire. She led many outings over the years and had very wide knowledge of natural history which she loved to share with us. Her enthusiasm was infectious, and greatly appreciated. Mary's walks were greatly enjoyed.

When Mary retired from teaching her love of nature and the outdoors led her to volunteer as a Seasonal Ranger at Hopetoun. She spent over twenty years there, becoming an expert on the many unusual plants growing in the grounds.

Until very recently she was able to enjoy Nats outings, and although her sight was failing, she was still very fit - able to climb a fairly steep path up from Scotlandwell, when others of us were struggling!

Sylvia Jeffries

Sadly Sylvia also died during this session. She served on the Council quite recently but had been unwell for some time.

THE TARGET 8 PROJECT
Visit to the Nursery at the RBGE
Heather McHaffie

A special shade tunnel in the RBGE garden nursery is dedicated to the propagation of native plants. These plants provide conservation collections in fulfilment of Target 8 of the Global Strategy for Plant Conservation which requires that 75% of threatened plants should be held as plants or seed, in ex-situ conservation collections, preferably in their country of origin. By growing the plants we learn more about them, and have the stock and expertise should we ever need plants for recovery projects. The selected plants were chosen from published lists giving the status of each species based on their distribution, the number of populations, or even number of individuals in the wild. The plants are mostly terrestrial ones as water plants require specific water qualities which would be difficult to accommodate.

A wide range of species has been grown with 143 out of the selected 170 in cultivation at one time or another. Annual plants such as Annual Knawel *Scleranthus annuus* were grown for a year and then the seed was stored. Repeated re-sowing and harvesting seed would produce plants selected for cultivated conditions, but we had learned that annuals such as these can be grown successfully and occasional sowing would establish the viability of seed. Once the stored seed has been used up it should be re-collected from the wild. Seed from some of our species are sent to the Millennium Seed Bank for use in germination experiments. This seed is taken from first generation wild-collected plants which can flower profusely and provide substantial amounts of seed, saving the wild populations from being harvested.

Some plants which ought to be perennials prove to be short-lived in the softer growing conditions at our low altitude. In the wild they would grow in a harsh environment, be only small plants, slow to mature, with fewer flowers but actually much tougher. This has lead to more impoverished conditions being provided for some species and many of the horticultural staff go on field trips to help collect seed and understand the plants better for having seen them in their natural habitat. There are also problems common to the whole nursery with growing large numbers of plants in close proximity. The plants are enclosed within the shade tunnel to minimise damage from any birds or animals, but vine weevil is one of the worst problems, eating the roots of an apparently healthy plant which is suddenly found to have a detached top that rapidly dies. The plants are all treated with nematodes. The compost used is peat-free except in a very few instances.

Some plants can be grown experimentally as when Jim Macintosh from the BSBI led an expedition to St Kilda and brought back some Dandelion seed which was deliberately planted into very small pots. The progeny from three separate collections were all the same new species, named *Taraxacum pankhurstianum*, after Richard Pankhurst who suggested the seeds be collected. While Dandelions tend to look very similar, this small species has hairy bracts, most noticeable before the flower heads open. Experimental cultivation can thus help with the identification of species that cannot be visited very frequently. It also is very informative to see plants which would normally not be visited at all in the winter, even though conditions are far from natural.

A further use for the conservation collections has been the collection of DNA samples for a UK-wide study. The project aims to examine DNA from all the native species. We were asked to produce samples of the species only found in Scotland but were in the fortunate position of already having many in cultivation. A small piece of leaf is rapidly dried in a small bag of silica gel and a pressed specimen acts as a voucher to confirm the identification. In visiting sites to collect the three samples that were required it has been possible to add to our collection of Target 8 species, although the summer of 2012 was very poor for seed collection. Once species can be identified from their DNA it is possible to name roots in a mixed sample which might e.g. be linked to fungi. Some fungi rarely produce fruiting bodies but they also can be identified from DNA samples below ground, opening up a whole new world that previously was inaccessible. Using the ability to identify species from the DNA in small leaf samples it is possible to verify the species used in drugs, herbal medicines and herbal teas.

Some of the plants in the shade tunnel are being grown so that they can be planted out in habitat restoration projects. One of the largest projects that has taken more than 10 years to come near to completion is for Montane Willows. The main species of concern is the Woolly Willow *Salix lanata* which is only found in 14 areas in Scotland. It is part of a special montane community of Willows that survive in small areas on steep cliffs. The project was working in three locations. The first to be planted was in the precipitous Corrie Garbhlich near Glen Feshie in the Cairngorms. Here there were very few *S. lanata*, too far apart to ever produce seed. So small bushes in root trainers were propagated from other areas and planted by climbers from Glenmore, using ropes to safely reach less accessible areas. A second site was within an enclosure at Corrie Sharroch off Corrie Fee. Here there are good remnants of montane scrub on the crags but despite being enclosed by a deer fence there was no spread into the corrie due to dense growth of vegetation. With good seed sources available all the willows for this site were grown from seed or cuttings collected within the corrie. Also, following the methods first used by the NTS at Ben Lawers, three species were grown to provide more natural communities. When they were planted there was a mixture of *Salix lanata*, *S. lapporum* and *S. myrsinifolia* at the higher levels grading down to just *S. myrsinifolia* along the side of the burn up into the corrie. Over 2,400 bushes in total were planted here in sites approved by Scottish Natural Heritage, occupying only a small area on the ground. The final site is in Caenlochan Glen where the deer numbers have been greatly reduced. This has not yet been planted as the heavy rain in 2012 made the access track impossible.

The collection also includes different clones of the endemic Arran Whitebeams, which make a good story of hybridisation, backcrossing and speciation. Many of the plants are planted in native sections of the various gardens, especially at Logan Botanic Garden. The native areas are much used in teaching schools about commoner species and for training courses in plant ID. A new display is being developed at the entrance to the rock garden in Edinburgh for the Target 8 species. This will ambitiously travel from the seashore to mountain top in about 50 metres! It will display many of the rare and threatened plants together with associated species. Planting has already started and will be extended as the specially collected plants mature. It is hoped to gather all the knowledge gained in growing these plants into a resource for conservation work.

INTRODUCING BEAVERS

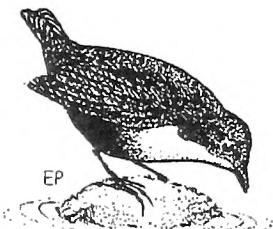
Jackie Muscott

In May, with the Botanical Society, I visited the private estate in Fife where the European Beaver *Castor fiber* has been introduced. We did not see any Beavers as they are nocturnal but there was plenty of evidence around. There were felled trees, a number of dams large and small, and we were shown the main lodge. The animals had by no means confined their attention to willows: some smallish conifers had been felled and a small plantation of Grey Alder *Alnus incana* (planted by mistake I understand) was being demolished. These trees were young, but a much larger tree nearby had also been attacked, while mature trees near the lodge had been wrapped in wire netting!

PERIPATETIC SWANS

Jackie Muscott

A visit to the Dundas Estate with the Fungus Group at the beginning of July revealed a number of breeding birds on the lake: families included Coots, Mallards, Tufties and Little Grebes, but no Swans. The ranger explained that they had a pair of Swans which had indeed raised a brood, but they had recently marched their young down the drive and out of the gate, and had reappeared at Cramond. Apparently they had done the same two years ago, but stayed put last year.



DIPPERS bobbing on stones

WILDLIFE ALONG THE RIVER ESK Whitecraig to Musselburgh and the Village of Inveresk

Sarah - Louise Davies

Though I have done this walk occasionally over the past few years, 2012 has been the year when I have completed the route on a fairly regular basis. I have called it my local walk even though I have to take the car to the start.

It is almost guaranteed that you will see flocks of Long-tailed Tits and Goldfinches during the colder months, along with Dippers singing. Kingfishers are occasionally seen and I have had excellent views with three sightings last winter close enough to tell if a male or female. Invariably there will be a Heron at the weir, or one to be seen when it is very cold, standing where it can catch the sun under the busy A6095 Bridge.

In the last year or so I have seen Whitethroats, a single Garden Warbler, a female Brambling, a Black Swan and a Mandarin Duck, the latter two no doubt escapes. Sightings were also made of a single Tundra Bean Goose, a Pink-footed Goose, and six Whooper Swans flying over. I watched a juvenile Hobby for at least ten minutes as it hawked for insects and ate them on the wing, bringing its talons forward; a fabulous sight! Though a good few years ago, this walk also gave me my first brilliant and memorable sightings of Waxwings, and in March I heard a Green Woodpecker's yaffle.

My first Snowdrops *Galanthus nivalis* of the year were seen on 4th January but I was really excited when I saw my first Yellow Star-of-Bethlehem, *Gagea lutea* on the 1st March. At the time I did not know the species and the following day, armed with more information, I went to look for it again. It took me some time to find the plant as it had on its 'cloak of invisibility' because of the recent rain. The rain had caused the flowers to droop, showing the green band on the yellow tepals which camouflaged them superbly in the damp woodland habitat. Eventually I managed to find 21 plants.

Other plants of note seen throughout the year were Toothwort *Lathraea squamaria*, Purple Toothwort, *Lathraea clandestina*, Wintercress *Barbarea vulgaris*, Dwarf Mallow *Malva neglecta* (six plants), Rock Stonecrop *Sedum forsterianum* (garden escape), Keeled Garlic *Allium carinatum*, Crimson Clover *Trifolium incarnatum* (*incarnatum* in community allotment), Perennial Wall Rocket *Dipotaxis tenuifolia* and Balm *Melissa officinalis* (another garden escape).

The first frog spawn I saw was in a pond next to the river on the 29th March but the site was inundated when the river was in spate about a week later.

On the 8th May a Duck Goosander was seen with her seven ducklings, three of which climbed onto her back when a dog appeared.

THE USHER INSTITUTE STARLING

Jackie Muscott

One spring day a couple of years ago my attention was attracted by a Starling displaying on a nearby roof. He was making a lot of noise, as only Starlings can, flapping his wings and practically turning somersaults. A month or so later I saw (the same?) Starling disappear through a hole in a grating high on the former Usher Institute (now a hall of residence). I did not see the bird at all last year, but there were tell-tale droppings below the grating, and this year I saw him again. First I heard a loud wolf whistle, and a few minutes later there he was disappearing through the grating.



CATTLE, BADGERS and TUBERCULOSIS

Elizabeth Farquharson

From time to time a localised outbreak of tuberculosis in cattle occurs which usually has good coverage in the media. These reports are usually accurate but leave much unsaid and as the method of handling these outbreaks is controversial it is difficult for the public to follow the arguments with insufficient information readily available.

Tuberculosis has been with us for generations. It occurs in a slightly different form in people, cattle and birds. The avian form is seldom seen. The human form was rampant a hundred years ago when the method of spread was poorly understood and there was no treatment. Overcrowded houses and unhealthy conditions in factories and mines increased the likelihood of spread. In East Lothian there was hardly a mining family which was not affected. The sufferers were cared for in the sanatorium at East Fortune. With the advent of modern treatment the sanatorium was finally closed and the site now houses the National Museum of Flight, and Concorde is stationed there.

The human form of TB is commonly a lung infection which is acquired by inhaling the bacillus which has been coughed into the atmosphere by an infected person. The spread of bovine tuberculosis (bTB) is usually by swallowing infected dairy products. It was estimated that, in the 1930s 40% of U.K. cattle had the disease. A year earlier the Tuberculin Test for cattle had come into being, but testing was voluntary. However, farmers were paid a better price for their milk if the herd was TB free. Testing became compulsory in 1950, and by 1960 the infection rate had fallen to 0.5% over most of the country. Scotland was the first area to be declared disease free; at the same time the level of infection in S.W.England was four times the national average. This area had, and still has large numbers of dairy herds and dense populations of Badgers. No correlation of these two facts occurred until a Badger from Gloucestershire, the county with the highest number of outbreaks, was found to have TB in 1971.

The relationship between cattle and Badgers and the spread of TB is hotly debated. With such an emotive subject it is important to keep the known facts to the fore. Mounting pressure on the government to deal with the Badger population led to the first cull in 1975. This was done by gassing all known setts in the chosen area. Inevitably the cull had its faults. Some setts in the area were not found; some farmers and landowners did not cooperate; the numbers of Badgers killed was not known; and there were no carcasses available for examination. Illegal gassing of setts became widespread even in areas where there was no infection. We are fortunate that Scotland has remained relatively free of infection but in the Lothians I collected about 30 skulls from outside reoccupied setts. Gassing was not used again for culling, trapping and humane killing being preferred. Results from culling have been disappointing. The immediate result has usually been a fall in the number of outbreaks for a year or two after which the number has returned to the pre-cull level. Sometimes the number of infected culled Badgers has been so low that doubts have been cast on the origin of the outbreak. Culling and examining the carcases is very costly averaging over £1000 per beast, so it is actually cheaper to compensate farmers for their loss. Is this expense justified when there has been no long-term improvement in the culled areas? An adverse effect of culling is the increased movement of Badgers from outwith the cleared area into the unoccupied territory. In one cull, the number of outbreaks was reduced in the culled area but increased in the surrounding area.

This is a difficult problem for the Government. The majority of farmers would like more culling but this is very expensive and shows no lasting improvement. A more scientific approach is for more research into the method of spread and the possibility of vaccinating cattle, Badgers or both. Farmers are not keen to vaccinate their herds. Considerable research is now being carried out to find an effective vaccine that can be swallowed by Badgers in bait, which would be easy to administer.

Trials are now going on in Gloucestershire with an injectable vaccine. This is a very time consuming project for which volunteers have been trained to cage trap and vaccinate the Badgers. The trial will run for five years after which it is hoped there will be some meaningful results. It is difficult for the general public to have a clear view of the problems when those in high authority have conflicting views. For the sake of the farming community and the badgers one hopes it will not be long before the disease is brought under control.

Footnote: Badgers are being vaccinated in *The Archers* story-line !

RAINFALL IN CORSTORPHINE



RECORD YEAR?

Munro Dunn

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2011	66	117	66	24	50	85	118	148	47	100	52	79	952
2012	45	13	11	112	101	155	199	84	82	127	61	131	1121
1971-2000	65	45	53	45	50	55	59	55	64	72	63	68	694

Some press articles suggested that Scotland did not share England's record rainfall last year, but it is fairly safe to say that the average Scot suffered a record breaking amount of rain, the drier areas being generally those with a low population density. Certainly the 1121mm which fell on Hillview Road was far and away the highest at that record- ing station in readings which now go back over 47 years, 1121mm is more than 50% greater than the Corstorphine long-term average of 694mm, and 15% above the previous highest of 974mm in 2008. 2012 was, therefore, quite exceptional as far as past experience goes. Can we dare to hope that it will not readily be matched in the years to come?

Initially, however, 2012 did not look likely to be a very wet year. January's rainfall was well below average, with only one rather wet day, the 15th, when 15mm fell. February and March were both exceptionally dry, with no prop- erly wet days and only 16 days with any significant fall at all. The 24mm total for the two months taken together was the second lowest for two consecutive months in the 47 year run of readings.

The weather changed abruptly at the beginning of April, which was the first of seven consecutive wet or very wet months. On only two days in April did the reading run to double figures, but there was a significant fall on 23. May's rainfall, also double normal was, however, the result of several fairly heavy falls rather than persistence.

The situation worsened in June and July, precipitation rising to about three times normal. In July it reached 199mm, the second highest month's reading of the 47 years. After a brief dry start to June there were only 7 dry days that month and 6 in July. August's rainfall fell back to 84mm, but this was widely spread with only 10 dry days.

The first three weeks of September brought some respite with only 18mm in 19 days, but subsequent frequent falls, several of them quite heavy, brought the month's total to appreciably above the long-term average. In October the rainfall returned to nearly double average. A major contributory factor was the year's heaviest fall of 42mm on the 10th.

November's rainfall fell back to average with only two substantial falls. Precipitation continued on a par with normal for nearly 2.5 weeks in December, but the remainder of the month was persistently wet with about 100mm in the last 13 days.

The longest continuously wet period had been from 26th June to 11th July when 135mm fell. Dry periods were few and brief, the longest running only from 20th to 29th March.

Not surprisingly, the number of days over the year with significant rainfall was 222 as against an average of 183, but as has so often been reported in recent years much of the higher rainfall is accounted for by the number of substantial downpours rather than a greater frequency of days with rain. 10mm or more fell on 32 days, and 20mm or more on 12 days.

OBSERVATIONS 2012

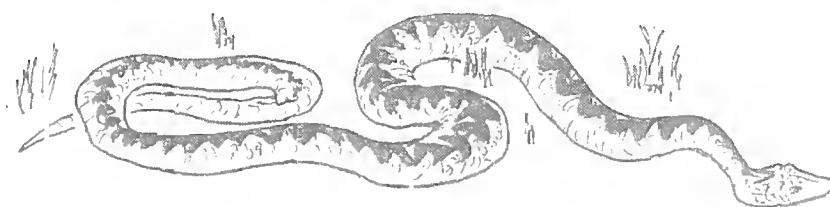
JANUARY		
1st	Hermitage of Braid: Jackdaws investigating a nesting site and a Great Tit practising its 'Teacher Teacher' call - very imperfectly.	JM
3rd	Warrender Park Road: The second bad storm of the winter. Large black waste bins sliding down the street and two windows of a local shop blown out.	JM
5th	Gosford Estate: Many trees down, mainly Beech, but also Cedar, Lime, Noble Fir, Norway Spruce and Oak.	JM
7th	Two Short-eared Owls hunting, between Caravan Park and La Farge Quarry, east of Dunbar.	JMcN
7th	Up to 10,000 Starlings in pre-roost murmuration display at Nivensknowe Caravan Park.	JMcN/ TD/NC
7th	Hermitage of Braid: Out-of-control dog chasing a Dipper 50 yards up stream. Too many dogs are walked here, to the detriment of the wildlife and waterside vegetation.	JM
9th	Innocent Cycle Track: About 30 Earth Stars Geastrum triplex by the path just east of the tunnel.	JM
15th	Two Collared Doves in Findhorn Pl, the first in area for some time.	JMcN
FEBRUARY		
7th	Bittern back at Duddingston Loch.	JMcN/ NT
8th	Linlithgow Loch: Smew 1♀(redhead) Wood Duck 1♀, latter possibly an escapee. Also a 'Miniature' Shelduck, size of a Mallard. All regulars over last few winters.	JMcN
15th	Garden record - all three Blackcaps (2♂, 1♀) present. Previously never seen male and female birds at the same time, nor both males.	JMcN
18th	Two Collared Doves on feeders.	JMcN
26th	First Bumblebee of the year for my garden, a Buff-tailed <i>Bombus terrestris</i> queen.	JMcN
MARCH		
4th	Scarlet Elf Cup <i>Sarcoscypha</i> sp.on fallen branch, Corstorphine Hill, Balgreen Rd.	DA
5th	Tawny Owl calling from nearby trees at Relugas Rd	JMcN

18th	Botanics : False Morel <i>Gyromitra esculenta</i> in flower-bed with <i>Petasites alba</i> , exactly as found 10 years ago. Also found in rock garden.	DA
25th	Blackford Pond: Lots of Frogs and Toads mating - and spawn drying out in shallow ponds. Drought conditions!	JM
29th	Dalkeith Park: Toothwort <i>Lathraea squamaria</i> still growing in some quantity near the tunnels. Beeflies <i>Bombylius major</i> (easily recognised by their long proboscis) flying by an earthy bank.	JM
APRIL		
17th	First Starling for ages on garden feeders ; four more on May 4 th ; six, including 2 newly fledged juvs, on June 7 th .	JMcN
MAY		
5th	Lochcote (ENHS outing): Adder's Tongue Fern <i>Ophioglossum vulgatum</i> at west end of reservoir. It was last recorded at Lochcote in 1901	DA
18th	Bruntsfield Links: 2 fully-fledged Lesser Black-backed Gull chicks plus parent - plenty of time for another brood!	JM
JUNE		
5th	Botanics: Blaeberry Bumblebee <i>Bombus monticola</i> on <i>Enkianthus campanulatus</i> . This Bumblebee is associated with hills rather than gardens.	DA
13th	Whitethroat (1♂) singing, at Klondyke Garden Centre	JMcN
JULY	A strange summer so far, vegetative growth of garden plants far greater than normal.	JMcN
2nd	Warrender Park Road: A young Greater Spotted Woodpecker feeding on peanuts early in the morning (not seen again)	JM
14th	Cockmuir (ENHS outing): Two populations of small Cudweed <i>Filago minima</i> by forestry track. This is a rare plant in the Lothians.	DA
14th	Aberlady: Narrow-bordered 5-spot Burnet Moths <i>Zygaena lonicerae</i> flying along with the 6-spots <i>Z. filipendulae</i> . It can no longer be assumed that a Burnet Moth in the area is a 6-spot	JM
15th	At last some flowers in garden - attracting mostly Buff-tailed Bumblebees.	JMcN
21st	Osprey over Lammerloch probably migrating south. A female Adder and a Dark Green Fritillary added to the excitement nearby.	DA
24th	Between Blackhope Byers and the Piper's Grave, grouse feeding in rush pasture. At first thought it was a female Blackgame, then a hen Red Grouse. Eventually a red eyebrow, scattered black feathers on the back and the size made me sure it was a Blackcock in eclipse. - first ever!	NC
25th	News of a compliant Water Rail family at Little Boghead Nature Park at Bathgate drew me to twitch it. I was one of many observers who were able to watch both adults and at least 3 downy chicks for long periods. Very unusual, when a squeal is all you normally experience.	NC

AUGUST		
4th	Williamhope (ENHS outing): One male Longhorn Beetle <i>Leptura quadrisignata</i> seen. This spectacular and uncommon beetle was also found in Williamhope in July 1993 and July 1994. Also found queens of two Cuckoo Bumblebee species, <i>Bombus campestris</i> and <i>B. sylvestris</i> .	DA
7th	A visit to Nicol's Moss SSSI in Cumbria was an opportunity to watch about a dozen Bog Bush Crickets <i>Metrioptera brachyptera</i> on the raised bog. Almost the most northerly record for a Bush Cricket, we also saw swathes of the striking White Beak Sedge <i>Rhynchospora alba</i> .	NC
15th	Abundant flowers on Sweet Pea, attracting Common Carder <i>Bombus pascuorum</i> and Red-tailed <i>B. lapidarius</i> Bumblebees.	JMcN
26th	On the southern edge of Morecambe Bay at a place called Fluke Hall we found dozens of Corn Marigolds <i>Chrysanthemum segetum</i> growing healthily as weeds in a field of Wheat. We thought this sight was only found down Memory Lane. Two of the most common Butterflies in the surrounding hedgerows, Gatekeepers and Walls were also very unusual sightings for residents of Lothian.	NC
30th	Near Blackness, West Lothian: 14 Buzzards in sky at one time	DA
SEPTEMBER		
3rd	Tom Delaney and I had gone to Hound Point to watch for Skuas. After seeing a few Arctic Skuas chasing Terns, our attention was drawn to a pod of Pilot Whales near to North Queensferry that were behaving in a disorientated manner. We thought that there were about 13 Whales and deduced that they were survivors from a larger group, 17 of which had died after being stranded at Pittenweem the day before.	NC
3rd	Burton-on-Trent: Banded Demoiselles <i>Agrion splendens</i> (Britain's largest and most beautiful Damselfly) still flying on the canal.	JM
9th	Dundas Castle: Skullcap <i>Scutellaria galericulata</i> by the loch and Musk <i>Mimulus moschatus</i> by the north entrance.	JM
14th	Circa 60 Pink-footed Geese flying overhead. Autumn has arrived.	JMcN
21st	Buzzard flying fast over south Edinburgh, east to west direction	JMcN
21st	Standing in the farmyard at Halls, East Lothian we were forced to duck as a House Martin flew past our heads and swooped up to a nest 5m. away. Chicks were quickly fed and it was gone. Very late brood; survival doubtful.	NC
OCTOBER		
11th	Flock of 17 Long-tailed Tits flew over garden, some stopping briefly on nyjer feeder.	JMcN
12th	Single Jay at Hopetoun House Garden Centre.	JMcN
26th	Circa 50 Fieldfare on tree in neighbour's garden. First of the winter here.	JMcN
NOVEMBER		

7th	Prompted by reports of Waxwings on the grapevine, we set off early to scour possible sites in Edinburgh. Kevin's eagle eyes spotted a flock in Portobello. After another few minutes running around the neighbourhood, found our quarry at Joppa Tennis Club : the first of the winter for us - 75 Waxwings devouring Rowan berries.	NC/TD/ KI
25th	First Blackcap of the Autumn - one ♂, followed by a ♀ on the 28th. Also ♂ Sparrowhawk, hopefully not eyeing them up for breakfast!	JMcN
DECEMBER		
9th	Water Rail heard squealing at Bawsinch, answered by another further over; and a Magpie mobbing a Sparrowhawk.	JMcN
15th	One Brambling ♂ in a mixed finch flock in garden. Also a Starling doing a perfect imitation of Willow Warbler song. Sounded most incongruous in mid-December!	JMcN
28th	Dalmeny shore (ENHS outing): Moss <i>Rhodobryum roseum</i> in dune slack and on Hound Point. The late Joe Carlyle pointed out this uncommon Moss at the same location on an outing on 23 March 1985.	DA
Observers	DA-David Adamson; JM-Jackie Muscott; JMcN-Joanie McNaughton; KI-Kevin Ingleby; NT-Natalie Todman; NC-Neville Crowther; TD-Tom Delaney.	

SIX-SPOT BURNET MOTH



THIS ADDER WAS SEEN ON THE LAMMERMOIR OUTING

BORDERS DOOCOTS

Munro Dunn



Grahamslaw House

Doos

Doocots may seem an inappropriate subject for a natural history journal, but the doos which inhabited them are perfectly suitable. These were Rock Doves *Columba livia* which are indigenous to large parts of southern Europe, Asia and northern Africa. In Scotland they were confined to coastal cliffs. Great opportunists, they now populate our urban streets as town pigeons. Pigeon-keeping was widely practised by the Persians and the Egyptians, the Greeks and the Romans as an important source of food. References go back to 3000 BC. The practice was introduced into Scotland by Normans who were granted lands by the Scottish Crown, especially in the 12th century. Rock pigeons have a great natural ability to home to their accustomed nest site, hence their use at various times and places as carrier Pigeons and racing Pigeons. Those farmed in the Norman-built doocots referred to above were generally brought considerable distances, and were then hefted to the cote by holding them inside until they had mated and hatched their first brood.

The Borders

For several years now, members of the Scottish Vernacular Buildings Working Group have been accumulating material for a countrywide gazetteer of doocots to record the present condition of the stock before this deteriorates further. It will eventually appear on-line, but in the meantime four area booklets have been published, and this note has been drawn from an article which catalogues the Borders doocots, to be published in the Group's annual journal later this year.

Within the Borders are the oldest-dated cote in Scotland and the only pentagonal cote in the kingdom.

Pigeons are mainly grain eaters, so doocots in Scotland are most commonly found on the agriculturally better lands in the east of the country, and as long as the primary aim was to maximise the offtake of pigeon meat, those in the Borders were concentrated mainly in the Merse and the limited areas of good general purpose land further inland. As the 18th century approached, however, greater prosperity and security encouraged landowners to exchange uncomfortable castles and town-houses for up-to-date rural mansions and matching ancillary buildings, including doocots. So the need to produce as much pigeon meat as possible became less important than enhancing the appearance of landed estates, and doocots had a role to play in achieving this.

The doocots themselves were chiefly constructed of local stone in the form of rubble, generally sandstone in the Borders, but occasionally the less malleable greywacke. Quoins, lintels, sills and decorative features such as cornices and stringcourses were generally of dressed sandstone, and roofs of slates or fissile mudstones.

Doocots

Of the various types of freestanding doocots in the Borders, the earliest surviving is the **beehive** (see illustration above). These were built solely of stone, circular, and tapered upwards to flattish domes, leaving a hole in the middle through which the birds could enter and leave. As this gave all-too-easy access to birds of prey they came to be capped by either a wooden glover or cupola with flight holes pierced in its sides, or a flat capstone raised on legs just high enough to allow Doves to pass.

The oldest dated cote in Scotland is of this type, bearing the date '1576'. It is at Mertoun House near St Boswells, and is divided into four sections by stringcourses. The third and fourth sections appear to have been added at a later date. (Most cotes are on private ground, but in this case the grounds are open for much of the summer.) Only four beehive doocots survive in the Borders.



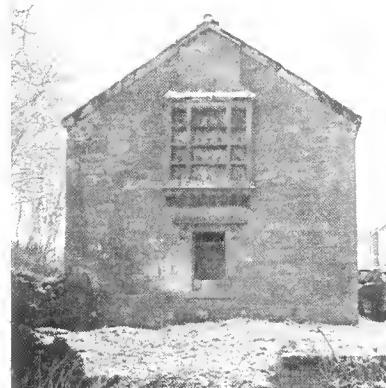
Mertoun House



Nisbet House



Edrom Newton Farm



Longformacus House

The 17th and 18th centuries brought **lectern** doocots, rectangular structures with single-pitch roofs of timber and slate or other fissile stone. Lectern cotes were common in the south of France, but almost completely missing from England. This shape and the wider span of the timber roofs allowed more space to be enclosed, and therefore more birds. Some were partitioned internally into two chambers. Lectern roofs generally sloped southwards between gables, often crow-stepped, which stood proud of the roof and these, together with a parapet to the north, provided a warm and sheltered resting area.

Flight holes were commonly in the middle of the roof, either in wooden dormers with holes pierced in one or more sides, or in a single line across the roof in a wooden swept dormer.

Twelve lectern doocots survive in the Borders, three of which are double lecterns.



Whitehall House with swept dormer



Kailzie House



Pinnacle Farm

As the 18th century approached, other types of free-standing doocots came to dominate. These were **towers**, chiefly cylindrical, at first fairly plain, but becoming more complex in shape and decoration as the cote's function turned increasingly towards enhancing the landscape of improved estates, and as the fashion for the picturesque replaced that for the classical. The cotes continued to be constructed mainly of rubble, but coursed stonework began to replace random, and flight holes and landing ledges set into the cote walls in ashlar became an additional decorative feature. Nesting boxes were occasionally of timber.

Marchmont House doocot is a prime example of a cote as landscape feature. It stands as a terminal vista at the east end of a tree-lined grass avenue running from the House for 2.2 kilometres, with a gentle dip in between. Of course, at that range its decorative detail would hardly be seen from the House.

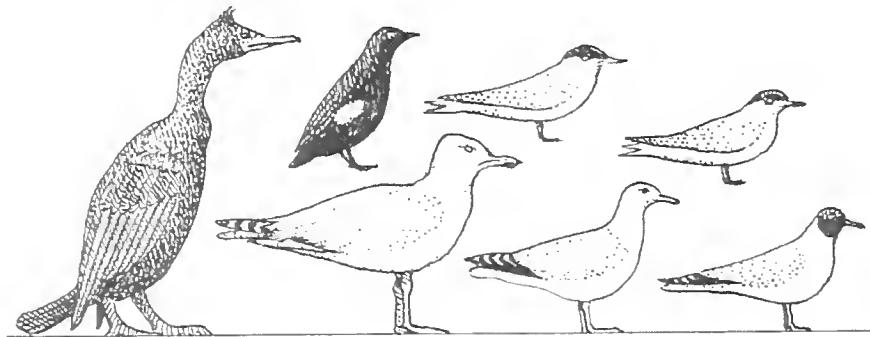
There are ten cylindrical tower cotes left in the area, and four rectangular ones. The small cote at Edgerton House is octagonal, and the pentagonal cote at Nisbet House, like Marchmont sited to be viewed from a distance over a valley, is thought to be the only one of this shape in the United Kingdom.

Larger 18th and early 19th century farm squares and stable yards sometimes have integral towers which house doocots, often above an entry pend, as illustrated at Edrom Newton. Other farms have doocots in lofts below the general roof line. These are not easily spotted unless, as at Garvald, they stand out because of decorative arrays of stone flight holes.

A few other categories will be passed over here, such as nest boxes cut into cave walls, cotes integral to village cottages, a cote in a castle turret, and small cotes in the roof space of garden summerhouses.

FORTH ISLANDS SEABIRD COUNT 2012

Bill Bruce



The first seabirds return to the islands in late winter to start laying claim to their nest sites, and the last species can still be on their nests in the autumn. However there is only a window of about a month where all the seabird species are on the islands, so we target this. If all goes according to plan we start at the end of May and hope to have the counts completed by early to mid June. As usual the weather caused us problems this year. The first trips went ahead according to plan and Bass Rock, Craigleath, Inchkeith and the other Inner Forth islands all were counted. Then the storms began and prevented us from getting out again until the end of June. By the time we were able to do our counts on Lamb and Fidra practically all of the Guillemots had left and gone back out to sea with their chicks.

To keep disturbance to a minimum, we only visit each island once during the breeding season so our figures do not necessarily reflect how successful the seabirds have been. The weather also prevented Lothian Ringing Group getting out to the islands for the majority of their planned ringing trips, but they did note that many species had a pretty poor year.

Fulmar: After three years where the total numbers have remained constant, this year has seen fewer attempts at breeding. Inchkeith is the only island where numbers increased.

Cormorant: Due to the season it was impossible to get close enough to the Cormorants on Craigleath to get a proper count. We don't normally land on Lamb and by the time of our visit the majority of the young birds had left their nests so again it was impossible to get a count. Inchkeith therefore was the only island where we were able to get an accurate count, and numbers there were better than they were in the previous three years.

Shag: This is the eighth year that, overall, this species has shown a steady increase. The East Lothian islands all show a decrease while May Isle and the islands further west all increased.

Greater Black-backed Gull: Overall, they are just one pair down on last year though some islands show increased numbers and others show a decrease.

Kittiwake: In 2011 numbers were down by approximately 20% and this year they are down again by 2%. Individual islands show some big changes, e.g. Bass Rock increased by 82 nests (+26%) while there were decreases on Lamb (-32%, 45 nests) and Inchcolm (-29%, 24 nests). On May Isle, which has nearly 2500 pairs, there was a drop of 220 nests (-8%).

Terns: Long Craig had no breeding Terns this year: it is not known whether this is as a result of the poor weather or disturbance from the nearby construction works for the new Forth crossing. Common and Arctic Terns managed to breed on May Isle, with numbers similar to last year. There were no reports of Roseate or Sandwich Terns breeding on any of the islands.

Razorbill: For the third year this species showed an increase averaging out at approximately 9% each year. Some islands show an increase, while others show a decrease on last year.

Guillemot: As mentioned above, our counts on Lamb and Fidra were too late to count Guillemot. However, looking at the other islands total numbers may be similar to last year's figures.

With thanks to the Forth Seabird Group, Scottish Wildlife Trust and Scottish Natural Heritage for allowing the use of their data.

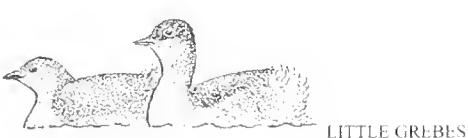
Seabirds	Bass Rock	Craigleith	Lamb	Fidra	Inchkeith	Carr Craig	Inchcolm	Haystack	Inch-mickery	Inch-garvie	Long Craig	May Isle	Total
Fulmar (AOS)	14	114	5	118	233	0	166	0	28	237	0	290	1205
Cormorant (AON)	0	30+	x	0	107	58	0	0	0	0	0	0	195+
Shag (AON)	11	258	77	172	242	19	24	0	71	0	0	545	1419+
Gannet (AON)	x	0	0	0	0	0	0	0	0	0	0	0	x
Eider (AON)		41+	x	x	x	0	x	0	37	55	3	902	1038+
Grt B-b Gull (AON)		18	?	3	8	1	1	1	0	1	0	40	73
Lsr B-b Gull (AON)	2	x	x	x	x	8	x	16	x	c27	0	2282	2335+
Herring Gull (AON)	x	x	x	x	x	23	x	12	x	c246	0	3281	3562+
Kittiwake (AON)	395	620	95	191	325	0	106	0	0	0	0	2465	4197
Cmn Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	20	20
Arctic Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	265	265
Roseate Tern (AON)													0
Sandwh Tern (AON)	0	0	0	0	0	0	0	0	0	0	0	0	0
Razorbill (AOS)	106	157	66	70	93	0	12	0	0	0	0	3068	3572
Guillemot (birds on cliff)	c1600	c1650	x	x	225	0	0	0	0	0	0	16991	20466+
Puffin (birds)	1840	65	c780	c650	0	28	0	38	0	0	x	3401	
	on sea	on land	on sea	on sea		on sea		on sea					

x = present but no count, 0 = none breeding, AOS = apparently occupied sites; AOB = apparently occupied burrows

A STRANGE BIRD

Jackie Muscott

On 29th January 2012 while passing Blackford Pond I paused to check up on the birds and noticed 3 sitting on a branch just above the water. The nearest was a Mallard, the second, somewhat smaller was a Tuftie but the third even smaller was a puzzle. It was stretching, with its wings (which were quite long and narrow) spread out and its head up, dark above, pale below. It was only after it folded itself up and slipped into the water, resuming its normal toy-duck shape that I realised it was a Dabchick or Little Grebe.



LITTLE GREBES

ARCHAEOLOGY in EDINBURGH'S DRINKING WATER

Preliminary findings of the underwater survey and assessment of archaeological features in six reservoirs throughout South Lanarkshire, the Scottish Borders, and Perth & Kinross

Emily Jean Stammitti

Archaeological features are found all over Edinburgh: in development plots along the canal, littered across the sea floor off St Abbs, wherever a digger has unearthed the surface of the road for the trams, in Old Town, and throughout the fields all through the Lothians - just to name a few! From early March through mid-May 2012, underwater archaeological investigation took place in one of the lesser-considered areas surrounding Edinburgh: in reservoirs. The 10-week study comprised the underwater fieldwork component necessary for a PhD in archaeology at the University of Edinburgh. During the spring fieldwork, six different reservoirs were visited and surveyed, in the hopes of analyzing the survey results post-fieldwork. The analysis would yield important information about the conditions of the variety of archaeological sites, once terrestrial, but now long inundated by the waters held in the Fruid, Megget, Daer, Camps, Talla and Upper Glendevon Reservoirs.

Research Objectives and Methodology

The building of reservoirs has long been controversial, because of damage to both the environment and archaeological resources, but they are necessary to long-term renewable energy and water security agendas. Calls for attention to 'reservoir-submerged archaeology', made by the World Commission on Dams, the US National Park Service, and in the form of University-funded workshops have focused predominantly on the concerted, but sadly not holistic or exhaustive enough, efforts of archaeological rescue excavations, the anti-heritage priorities established by big dam companies, and what the National Park Service called 'the inherently damaging' and irreversible effects of reservoirs. The works undertaken this spring were organized to test some of these claims of 'inherent' and 'irreversible' effects through the survey of sites that were surveyed either pre-inundation, or surveyed by local groups during low water periods of the reservoir's life. Through post-survey comparison of the two sets of results, one could then establish whether sites were inherently damaged - and if so, to what extent and in which locations - or if other data may emerge, putting to rest the notion that reservoir equals damage.

The list of individual sites chosen for survey is long - over 36 unique features were located, surveyed, drawn and photographed. Two features will be discussed in some detail in this literature so as to provide the reader with an idea of the methodology and processes used on-site, a basis for comparison in the data sets, and to discuss some of the inherent difficulties in underwater fieldwork. The site of the Kirkhope Tower located in the Daer Reservoir and the Fruid Cottage in the Fruid are used for these purposes, since they are both determinably-sized features with interesting histories, easily described and pictured structures, and may pique the interest of the reader more than sites which, though still important, are imbued with fewer of the aforementioned attributes.

The works involved in recording features varied from working within a few square metres to more than 100 square metres. In all cases, the location and plans of features were carefully recorded by GPS, drawing and photography when possible. In the event of large features, individual photographs of the entire site (forming a photomosaic) could not be taken, due to time constraints and poor water visibility. When entire site photography was not possible, the feature or important cross-sections of it were video recorded in slow motion so that still photos to scale could later be extracted and reassembled. Most of the underwater drawing comprised triangulation measurements and drawings of feature dimensions and notable extrusions. Smaller features were drawn to scale underwater and photographed in as few frames as possible.

Choosing sites and assembling a team

The initial decision to survey archaeological remains in Scottish reservoirs was not undertaken lightly. Appropriate reservoirs were needed, and over a six-month period several dozen reservoirs were scrutinized for a variety of factors. All of the chosen reservoirs needed road access and known archaeological remains. However, just knowing archaeological remains were present was not enough; those remains of features needed high quality plans or pictures, if real data were to be collected. Some understanding of the local flora and [potential] fauna was also helpful, in addition to permission to access the waterway, and global positioning data (GPS) where possible, lest divers stray onto a tumble of

stones and mistake them for the archaeological feature! Given that very few reservoirs were surveyed prior to any type of reservoir inundation, the selection process began narrowing very quickly. The discovery of the locally run Biggar Archaeology Group (BAG), led by Tam Ward, hastened the decision process.

Tam's team of archaeologists (comprising volunteers from the greater Biggar area) completed in depth surveys of many of the reservoirs and reservoir valleys in South Lanarkshire and the Scottish Borders. Although none of the members of the Group are underwater archaeologists, Tam relied on extremely low water periods to initiate survey and excavation of archaeological features that appeared on the new shorelines, also known as the draw-down zone of the reservoirs. The terrestrial work was quickly and proficiently carried out, with results showing moderate levels of erosion and damage to many features located in the draw-down zone. Among the features recorded were cairns, the Kirkhope Tower, Bronze Age Settlement Platforms, and a large mound of undetermined purpose. With the plans and records from the Biggar Archaeology Group (BAG), the Camps, Daer, Megget, Fruid and Talla Reservoirs were slotted for survey.

Concurrent exchanges also took place with the Perth and Kinross Heritage Trust (PKHT), under the auspices of David Straehan. The PKHT was involved in the 2003 recording of site data, when the Upper Glendevon Reservoir's water levels lowered to such a great extent that a whole new landscape of uncharted archaeological remains were exposed, thanks to the reservoir's erosion of the topsoil and natural floras. That team focused its concerted efforts, under the direction of the Royal Commission on the Ancient and Historic Monuments of Scotland, on investigating what appeared to be a Motte or mound, several uncovered cairns, sheepfolds and a quick inspection of a local set of farm buildings. Therefore, the Upper Glendevon Reservoir was added to the list of reservoirs for survey.

The team assembled to retrieve and record data consisted of two-dozen volunteers, representing eight different countries. From Japan, France, Spain, Sweden, and the USA all volunteers came equipped with full dive gear and ready to plunge into the reservoirs two to four times per day. That says quite a lot about these generous individuals who time and again donned cold, wet dive kit to surface swim up to 200m across the reservoir, dive for 30 minutes in $\leq 8^{\circ}\text{C}$. After surfacing, they would then swim back to shore and perform the usual shore side duties, which could include everything from serving as the rescue diver for the next rotation of divers to helping cook lunch or fill in paperwork. Many of the volunteers were duly anxious about the prospects of diving in the reservoirs assigned them: the water was never greater than 8°C and when the fieldwork started, was nearer to 2°C - (a chilly temperature for even the hardiest among the Scottish drysuit divers). The visibility within the reservoirs was between 0.5 and 6 metres, and for many of the divers, this opportunity served also as one component of underwater archaeological training. All of their skills in diving, underwater navigation, photography and drawing were put to the test daily. And because of all their efforts, the resulting data sets were a resounding success.

Sites investigated

Both the Kirkhope Tower and Fruid cottage surveys proved interesting, enjoyable endeavours that were not only visually appealing for the underwater eye, but also remarkable displays of how some structures submerged in reservoirs can retain some, if not all, of their contextual importance. The geology of the Daer Reservoir, containing the Kirkhope Tower and the Fruid Reservoir is similar. The Daer Reservoir is filled by the upper Clyde River in South Lanarkshire, while the Fruid Reservoir is filled by the Fruid Water, an upper tributary of the River Tweed. Heavy surface deposits left from the last glacial maximum within the Tweed and Clyde catchments cause high levels of alluvium, uncategorized drift deposits, glacial sand and gravel, as well as peat to be present at rest on the reservoir floors and as suspended particulates.

The survey of the Kirkhope Tower began on a cold March morning. Volunteer divers held a waterproof GPS in hand and set out on the surface of the Daer to attempt the initial location of the Tower. A poor set of satellite signals delayed the initial location by hours, but finally a buoy line (or surface marker buoy - SMB) was gingerly dropped into place, measured at 8 metres in depth, and a fresh team of divers entered the water. The initial descent to a potential feature was always the same: divers descended down the line to the reservoir floor and began searching for evidence of the feature, with torches lit, by making a circular search pattern out from the primary buoy line. Each circle around the line ended by the range

of the search increasing by two metres. Location was normally within a ten-metre radius from the initial GPS point, and a new SMB was inflated and released to the surface, thereby marking the correct point.

Once a feature was located, the next step was to carefully determine the extent of it. With a bottom composition of extremely fine silts and peat, and no natural flora to hold the sediments in place, causing a silt-out was extremely easy. A misplaced hand into the sediment or a careless fin kick, and the water visibility would be reduced from 1-3 metres to a mere centimetre. With a risk of vertigo, disorientation, temporary buddy separation or potential feature disturbance, minimizing incidents of silt-out was critical to each dive event. Assuming divers could see each other by the end of the exploratory dive, small-scale photography began by taking photographs of areas ‘of interest’. The area of interest of the Kirkhope Tower was the perimeter and stone spiral staircase. The sedimentation over the foundation of the Tower was so fine that much of the attempted photography proved fruitless. A specialized technical diver took extremely slow motion video footage of the entire feature using a high tech High Definition (HD) camera and large external lighting. These images are still being processed.

In the meantime, the dive teams took turns making careful measurements and drawings of the feature using baseline and handheld tape measures, working with triangulation and drawing out their recordings on shore at the base camp. Special attention was paid to the stairs, which protruded out into the reservoir and would be more likely to show signs of erosion, and the Biggar Archaeology Group provided detailed measurements of this area. Since diving permission was only issued on the basis of non-invasive survey, areas covered in silt were not drawn in detail which would have involve the temporary relocation of those sediments. Fortunately, after three days of diving, a plan could be produced of most of the Tower with focus on the stairs (see figure 1).

One week later, diving was centred in the Fruid Reservoir on the site of the Fruid Cottage. The cottage was located by surface GPS and a line dropped to 4 metres, which was a huge advantage as the spread of the cottage measured out to 14m X 16m, and the shallow water would dramatically improve visibility of the site. Initial attempts at measuring the site were complicated by the size of the feature, the still poor visibility, and the breadth of the structure’s spread. Walls, instead of being knocked down by the flow of the filling reservoir, were intentionally knocked over prior to the reservoir’s filling due to concerns about collapsing. With the high rate of debris spread over a large area underwater, divers were initially concerned that measuring to the farthest reaches of the rubble would create an inaccurate representation of the state of the site.

By referring back to the Biggar Archaeology Group records, key pieces of wall were pinpointed by which to measure and crosscheck the extent of the site. Measurements were finally made using triangulation from a baseline. Photographing the site proved a challenge due to its size. The perimeter was filmed in slow motion, as was a two-metre section on either side of the baseline. By combining the drawn plan with perimeter images and a central photomosaic (with a baseline aligned N-S), the same data was generated without the need for images of every square metre of the feature.

There were several points of interest within and abutting the cottage. A large plank of limestone flooring was discovered at the northeast corner of an outbuilding, which was not shown on any known map or plan of the site, which suggests that the erosion power of the reservoir uncovered it post-inundation. Likewise, several artefacts were found scattered about the cottage, including one 19th century peasant’s leather shoe, a wooden eating utensil, and buttons. All artefacts were left in situ.

Results of investigation

After the completion of the fieldwork, all data was compiled, plans completed and analysis begun. The first step was to divide the features into distinct typologies, which would assist in analysing damage to features. The typologies that emerged were based on construction material, rather than age, and whether the material was somehow connected, either by nails or mortar, or naturally stacked, and whether it had been knocked down pre-flooding or not.

These were four subcategories: Stone –A, B, C; Brick –A, B; Earthen –A, B; Man made- Iron, Wood. Stone A included the features that were standing when the reservoir was created. Stone B features were fixed together either with mortar or cement, and intentionally knocked down, and finally Stone C features are naturally stacked, not affixed. Brick features were separated into two categories:

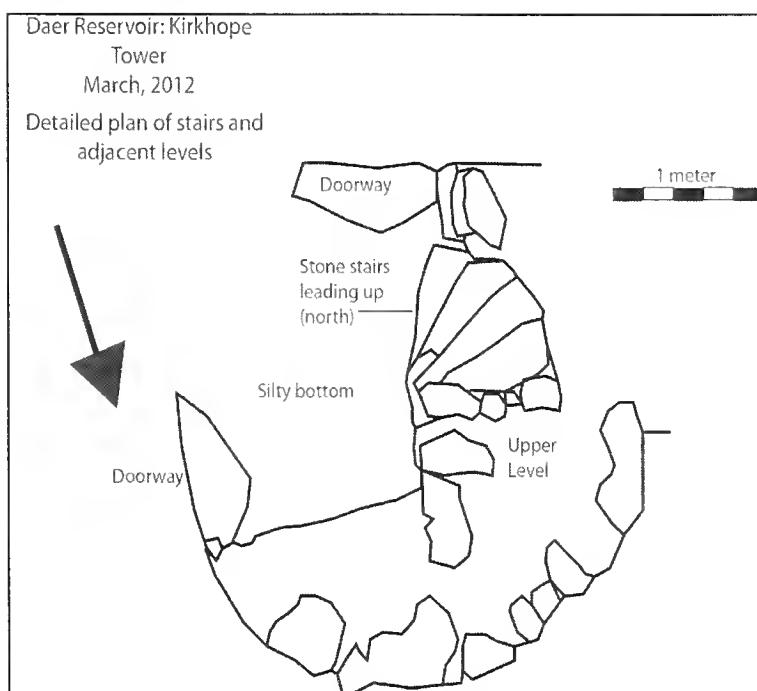
those knocked down before flooding, and those that weren't. The earthen category denotes the difference between those earthen features that were built up and possibly packed, like a mound, or dug into the earth, as in the features in the Bronze Age platforms and enclosed settlements. Finally, there was a man-made grouping, consisting of metal-based construction elements or wood.

After the typologies were completed, features were assigned different numeric values based on scoring from a damage assessment form. All types of damage and risk factors were considered: erosion, location in the reservoir, proximity to key channels, temperature fluctuation and amount of sedimentation. The amount of damage was plotted against each feature's depth in the reservoir. There were two clusters on the graph: earthen features which were mainly at the same depth, showed quite a high degree of damage; otherwise the degree of damage related to the depth in the reservoir, those in the draw-down zone showing the most damage. The draw-down zone in a reservoir is essentially the equivalent of the intertidal zone in the ocean; where the water level fluctuates generally once per year, filling with water over the winter months and falling during the summer months, sometimes by 10-15m. This slow but yearly fluctuation erodes away at features within this dynamic zone, causing the rapid exposure and then potential erosion of certain types of sites.

Conclusion

So what does this mean for the reputation of reservoirs and their effect on archaeological features in them? It means that at least for the present, reservoirs pose minimal risk to the overall abundance of information within them - outside the draw-down zone. Below the draw down zone, water and sediment moves very little, the water remains cold and in some cases the sediments cause an anaerobic environment which is very good at preserving all types of archaeological materials. Chemical changes within materials' structures will remain inevitable, just as the pH of shipwreck or crannog wood changes over time; this does not render the features lost, destroyed or irrelevant. Instead, a different set of procedures and processes will apply to them in the present and future if data retrieval is required, but preliminary evidence in Scottish reservoirs depicts this as a possible and obtainable goal.

However, archaeological features in the draw-down zone are at real risk, and the bad reputation around the world that reservoirs receive is likely based on this visible zone of damage and the more general 'out of sight, out of mind' mentality that often accompanies all forms of underwater archaeology. It is in these areas that future attempts at excavation, survey and recording should take place. This means re-evaluating commercial archaeology's role in reservoir flood plain surveys and developers' priorities. Rather than allotting large contracts to archaeological companies to survey the entire planned reservoir valley, a more focused and less expensive effort should be conducted in areas predicted as the new reservoir's draw-down zone. This will not only benefit the archaeological features in that zone, allowing for better survey and understanding of those distinct sites, but also drives better archaeological research: a more thorough understanding of sites, rather than a mass generalized cataloguing of many sites that will be within the reach of future generations (just not, perhaps, our own). In the meantime, steps at better monitoring and recording of still-existent features within that zone should remain a priority, to both amateur and professional archaeologists, whether they dive or prefer to remain on land. With a growing global population, concerns about water security and national agendas aimed at improving the sustainable energy sources, reservoirs are here to stay. The question is: 'To what extent will our archaeological resources continue to be filtered through into our drinking water?' or 'Can they simply remain quietly settled on reservoir floors waiting for a new generation of archaeologists to interpret?'



WORKSHOP at Vogrie Country Park 1

28th October

A GREAT SUCCESS!

Sarah-Louise Davies

Not knowing quite what to expect, it was with an open mind that I attended the first Nats workshop at Vogrie. I arrived to find that there was an array of microscopes and reference books and I was suitably impressed. An introductory talk was given by Vladimir with a suggestion that we go out in small groups and to work on what we had found when we returned.

Mentioning to Katherine that I had a plant photograph that had me flummoxed and when I gave her a description she immediately informed me that she had exactly the same problem and that the plant concerned was a Viviparous or Proliferating White Clover *Trifolium repens*. What an excellent start to the day! I paired up with David and off we went towards the lime kilns. Along the way a collection was made of Gall-covered leaves, Fungi, Bryophytes, a single Slug and a single Ladybird. Unfortunately I dropped the Ladybird, but not before it was identified as a 16-spot Ladybird, *Halyzia 16-guttata*. At our arrival at the kiln we found fossil brachiopods.

All the groups arrived back before lunch and immediately and with great enthusiasm started working on identification of their specimens. Katherine and David had wonderful collections of Mosses and Liverworts. Dorothy, Jackie and Sandra worked on Ferns. Vladimir and Mary concentrated on their Fungi.

With help from an FSC fold-out-chart on 'Plant Galls in Britain' I managed to identify a couple of galls and after taking my samples home I successfully identified the rest. The following table gives the details of the galls which were all on leaves.

Note: The hairy galls seen on the Copper Beech, *Fagus sylvatica f purpurea* are the same as those seen on Beech, *Fagus sylvatica*. As a result of my newly found enthusiasm for plant gall I recently purchased a small photographic guide, 'Britain's Plant Galls' by Michael Chinery which I thoroughly recommend. I had no idea until the workshop that there are over 1,000 different kinds of galls in the British Isles and that galls are caused, not only by wasps but by bacteria, nematodes, other insects, mites and fungi. Even by other plants.

Plant	Common Name for Gall	Insect	Insect Name
Meadowsweet <i>Filipendula ulmaria</i>		Midge	<i>Dasineura ulmaria</i>
Alder <i>Alnus glutinosa</i>	Blister Gall	Mite	<i>Eriophyes laevis</i>
Copper Beech <i>Fagus sylvatica f purpurea</i>	Hairy Gall	Midge	<i>Hartigiola annulipes</i>
Oak <i>Quercus sp</i>	Silk-button Gall	Wasp	<i>Neuroterus numismalis</i>
Oak <i>Quercus sp</i>	Common Spangle Gall	Wasp	<i>Neuroterus quercusbaccarum</i>

The Slug, a Leopard Slug, *Limas maximus* caused various reactions from 'Ugh' to 'Oooh, I've never seen one of those before'.

The Leopard Slug is not a garden pest as its diet consists solely of rotting vegetation and fungi. It can be quite a sight because the body length of adults varies from 10cms up to 20 cms. Every one differs slightly in its pattern of black spots. During the winter they hibernate in burrows underground and the lifespan of *Limas maximus* is 2.5 to 3 years. Some other species die in the autumn.

For those of a nervous disposition please do not read the following:

After mating the leopard slug often has trouble disengaging. The thick mucus can hinder their ability to withdraw their inordinately long penises. If withdrawal proves impossible, one slug gnaws off either its own, or its partner's penis. The scientific term for this is apophallation. The missing penis does not regenerate. The slug so apophallated is now strictly female.

Recently I have found three of these slugs as a result of The Wildlife Information Centre's request for information on sightings of this gastropod molluse.

Another very enjoyable part of the day was having the opportunity to look down the microscopes into another world. A most memorable view was to see Fern spores escaping from the sporangium where the annulus had dried out, moving backwards pulling the sporangium open and releasing the spores. It brought back very happy memories of having attended the excellent Fern workshop with Heather McHaffie at the Kindrogan Field Studies Centre.

I would like to say a big thank you to the organisers of the day, in particular Vladimir and Mary. The group was so enthusiastic and convivial with knowledgeable exchanges among all participants. Also I would like to extend a big thank you to the generosity of those who supplied the tea, coffee, cakes and biscuits. The carrot cake is now on my shopping list!

WORKSHOP at Vogrie Country Park 2
24th November
Jean Murray

This was the second such day organised by Vladimir Krivtsov. I'd missed the first so wasn't sure what to expect and was pleasantly surprised to find we were in a big upstairs room laid out like a lab, with plenty of room for microscopes, books and whatever specimens we might find.

Vladimir sketched out the plan for the day: join whichever group you wish, stay out till between 12.30 and 1pm, have a walk at any stage if you prefer, then get back with whatever you've collected in time to eat your own lunch or go to the cafe. Thereafter it's heads down looking at specimens.

Neville visited the pond, while I went looking for Bryophytes (Mosses and Liverworts) of which there were plenty, though all seemed the same at first. Mary Clarkson had thought of looking at these for a change but when we gathered again it was clear there were Fungi aplenty, mostly from decaying wood, which needed her expertise.

The trouble with handfuls of Moss from woodland floor or tree bases is that once you start to disentangle them you find you have not one but several species and quite likely a Liverwort as well. Under the microscope there's a whole new fascinating world of different leaf shapes and cell structures which is truly amazing. Tiny Spiders and Caterpillars can be an added interest!

Among the bryophytes noted were:

Brachythecium rutabulum, covering ground, stone and logs - with typical rough-stalked capsules.

Mnium hornum, on ground under Beech, dark green at this time of year.

Ulota crispa cushions with capsules, on trees, mostly Elder.

Radula complanata a tiny Liverwort on Sycamore bark.

Mary later phoned to say she had keyed out something she'd taken home which turned out to be *Hornolia trichomanoides*, a Moss I'd never managed to find. Just shows how good a study day can be.

Many thanks to Vogrie and to Vladimir for making it possible.

EXCURSIONS LIST 2012



Currie-Lymphoy-Balerno Circuit	14th January	Kathy Buckner
Valleyfield and Torry Bay	18th February	Wilma Harper
Bawsinch and Duddingston Loch	17th March	Joanie McNaughton
Elie towards St. Monans and return	28th April	Molly Woolgar
Lochcote Reservoir	5th May	Jackie Muscott
Braid Burn	9th May	Mary Clarkson
Dawn Chorus, Bush Estate	12th May	Lesley Fairweather & Kevin Ingleby
Arthur's Seat	16th May	Stuart Monro
Pressmennan Lake Circuit	19th May	Malcolm Lavery
Royal Botanics Garden Nursery	23rd May	Heather McHaffie
Burnmouth to Eyemouth	26th May	Lyn Blades
Gailes Marsh	2nd June	Neville Crowther
Barony College Weekend	08-10 June	Neville Crowther
Newts in Calder Wood	16th June	Peter Leach
Easter Inch Moss, Bathgate	20th June	David Adamson
The Soonhope Burn, Peebles	23rd June	David Adamson
River Tyne, Haddington	27th June	Pauline King
Dowlaw and Brander Heugh	30th June	Michael Braithwaite & Barry Prater
Cramond Island	4th July	Neville Crowther
Corstorphine Hill (Bumblebees)	11th July	David Adamson
Cockmuir - Toxside	14th July	Neville Crowther
Lammermuir Wander	21st July	Douglas McKean
Nine Mile Burn	25th July	Lynn Youngs
Loch Leven	28th July	Jackie Muscott
Community Bee Project, Silverknowes	1st August	Helen Macfie
Williamhope	4th August	Neville Crowther
Skateraw and Torness	11th August	Tom Delaney
Donald Rose and Carriston Reservoirs	18th August	Jackie Muscott
Dere Street	25th August	Mary Clarkson
Plean Country Park	1st September	Jean Long
Cairngorm National Park	7 - 9th September	Neville Crowther
Garleton Hills	5th September	Pauline King
Dawyck Botanic Garden	22nd September	Chris Ellis
Devilla Forest	29th September	Wilma Harper
Binning Wood (Fungi)	6th October	Neville Crowther
River Tyne Walk	27th October	Pauline King
Water of Leith, Craiglockhart and Colinton Dells	17th November	Malcolm Lavery
Plant Hunters at the RBGE	1st December	Peter Tothill
South Queensferry	28th December	Janet Watson



EXCURSIONS 2012

Currie-Lymphoy-Balerno Circuit

Date 14th January

Leader Kathy Buckner

On a dry but overcast day a group of 23 well wrapped-up naturalists set off from Currie Kirk along the Lymphoy track to Balerno. As this outing was shortly after the severe gales of 2nd January there were many fallen trees along the route including a number of mature Beeches. Our most notable finds were:

Fungi *Clitocybe infundibuliformis*, a coppery Funnel Cap on a steepish slope; Velvet Shank *Flammulina velutipes*, a winter Toadstool that grows on dead wood and is frost-hardy; Oyster Fungus *Pleurotus ostreatus*, Turkey Tail *Trametes versicolor*; and Jews' Ears *Auricularia auricula-judae*, all of which are Bracket Fungi growing on dead wood. We also found the jelly-like *Tremella mesenterica* and a couple of rust type fungi. On the many fallen Beech trees we found Shaggy Pholiota *Pholiota squarrosa* and masses of *Stereum sp.* On the banks of the Water of Leith, Earth Stars *Gastrum triplex* were very numerous.

Ferns We found the evergreen Hard Shield Fern, *Polystichum aculeatum*, the rarer Soft Shield Fern *P. setiferum*, three other evergreens Wall Rue *Asplenium ruta-muraria*, Maidenhair Spleenwort *A. trichomanes*, and Hartstongue Fern *A. scolopendrium*.

Birds Most notable was a fine array of woodland birds, a pair of Nuthatches, Great Spotted Woodpecker, Treecreepers, Sparrowhawk and Buzzard, three common Tit species and Mistle Thrush.

Flowers David Adamson found newly germinated bright green 'arrowhead' leaves of Parson in the Pulpit *Arum maculatum*. Winter Aeonites *Eranthis hyemalis* were also in flower on the floor of the woodland and the leaves of newly emerged Leopardsbane *Doronicum pardalianches* covered large areas between the trees.

On the return we walked beneath the Currie Wa's coated in erustose Lichens. (This was where Dougal Haston started his climbing career).

Insects We saw one hibernating Orange Ladybird *Halyzia 16-guttata* and a torpid Moth that Neville Crowther later identified as a Pale Brindled Beauty *Phigalia pilosaria*. It was camouflaged wonderfully against the Lichen-coated tree trunk.

We later discovered we were tracing (baekwards) the footsteps of an excursion made by members of the Edinburgh Field Naturalists and Microscopical Society on July 6 1904 (*Transactions of the Edinburgh Field Naturalists & Microscopical Society*; 5, 1902-1907, p305).

We wondered what differences there might have been in the natural history of their day out and ours. The Water of Leith Walkway would have been a railway track and there would have been some obvious differences such as no Buzzards, Nuthatches or Woodpeckers!

Kathy Buckner

Note: The Beech trees so recently blown over would have been mature and still standing!
Thanks to Neville Crowther and David Adamson for contributions to this report.

Valleyfield and Torry Bay

Date 18th February

Leader Wilma Harper

Wilma Harper led us to the Valleyfield Colliery Mine Memorial commemorating the pit disaster and outlined the basic geology and social impact of mining on the local area.

'Erected in memory of all who lost their lives as a result of an ignition of firedamp and coaldust in the Diamond section of Valleyfield Pit on October 28th 1939 at about 4am. Tearfully they came to Valleyfield Pithead on that autumn day in painful grief to claim the dead with deep respect we pray.'

Coal was mined from 1908 until 1978, and in 1964 a link was made under the Forth with Kinnel Colliery. At Valleyfield Estate the now demolished, classical mansion was built between 1750 and 1800. The owner Sir Robert Preston commissioned Humphry Repton to improve the landscape; he produced his trademark 'Red Book' as a record of his only Scottish commission. The house was abandoned in 1918 but remnants of the designed landscape which survive include the carriage drive with rustic bridges along the Bluther Burn, and remnants of the walled flower garden and ornamental canal. Much of the land is now owned by Fife Council and maintained as a Community Woodland by local volunteers, assisted by the Fife Ranger Service and the Forestry Commission. The Garden History Society are giving some guidance into restoration of the walled garden and canal. The estate has suffered from vandalism, including glue sniffers torching trees; however, it now seems to be valued by the locals and appreciated as an attraction. On this cold February day there were many people admiring the Snowdrops *Galanthus nivalis*.

We were aware of many small birds in the trees and eventually came across a flock of busy Siskins working in the tops of ivy-clad trees, especially a tall Spruce *Picea sp.*, and Grey Wagtails by the water. At ground level were early signs of spring with patches of White Butterbur *Petasites albus*, Dog's Mercury *Mercurialis perennis*, and a solitary Coltsfoot *Tussilago farfara*, at the point of flowering.

In a clearing by the burn stood the remains of the Gardener's Cottage that had been home to David Douglas. He completed his apprenticeship on the Earl of Mansfield's estate at Scone and moved to Valleyfield Estate where he made good use of the library of botanical books, and worked with the head gardener before becoming under-gardener at Glasgow Botanic Garden. Born in 1799, Douglas is credited with introducing over 240 new plants to Britain; he died prematurely in a bullpit trap in Hawaii in 1834.

A sloped area had been cleared of plants to reveal the bare bones of the walled garden, remains of a fine stone staircase and the depression showing the location of the 'canal'. A remnant of the earlier garden was rosette-forming plants with soft hairy green leaves and red underside, turning out to be Kidney Saxifrage *Saxifraga hirsuta*, from the London Pride group.

During lunch we were delighted by the presence of a cock Bullfinch in the sunny woodland edge. Our afternoon started looking across to Preston Island lying in the centre of Torrie Bay. Ruins on the island mark where Sir Robert Preston, 6th baronet of Valleyfield, worked coal. He made his fortune with the East India Company and his maritime exploits earned him the nickname 'Floating Bob'. Early in the nineteenth century he sank three pits, installed a steam plant, built cottages for the colliers and laid piping to supply fresh water to the island. This was abandoned following an explosion in 1811, and salt pans were established as an alternative industry. The island has more recently expanded with fly ash from Longannet Power Station and gained designation as a Local Nature Reserve in 1996, funded by Scottish Power. The resulting accessible mudflats provide abundant food for coastal birds and habitat for coastal plants. Unfortunately, we abandoned our afternoon walk because of the poor conditions for observing life on the shore; a cold biting wind, rain and a low sun.

Pauline King

Endpiece

After reports of heavy snow in Edinburgh and exposure to the bitter wind on the sea shore, most of our party left for home. Vladimir and I however, went down to the coastal path just to see what it was like and almost inevitably, given Vlad's enthusiasm, ended up walking out onto the mudflats and along to beyond Crombie Point.

Torry Bay is a local nature reserve managed by Fife council, as a feeding area for sea birds, particularly waders and ducks. Notably the mud flats have large beds of Dwarf Eel Grass. Unusually and confusingly this genus resembles a green alga but is a flowering plant related to the Water Plantains. This species is *Zostera noltei*. A flock of about thirty Wigeon and a few Shelducks were feeding on the plants.

Other birds probing the mud included Curlew, Oystercatcher, Redshank and groups of Turnstones, mainly rummaging amongst the seaweeds. The seaweeds grow where some solid attachment is possible, on the reefs that break the surface of the mud and silt. The 'browns' were most numerous and included Channel Wrack *Pelvetia canaliculata*, Spiral Wrack *Fucus spiralis*, Saw Wrack *F. serratus* and most commonly in the middle shore, Knotted Wrack *Ascophyllum nodosum*, commonly supporting tufts of a 'red' epiphyte – a species of *Polysiphonia*. We also identified small patches of the 'reds' Irish Moss *Chondrus crispus* and *Lithothamnion*, coating the rocks like pink paint.

Myriads of empty Cockle and Winkle shells lined the tide line on the beach, but they were far outweighed by tons of coal particles forming a black band along the entire shore. Why? How long is it since the pit closed?

Eventually the wind got too strong, at least for me, and we left for home, stopping for ten minutes at Crombie to watch a flock of c. 700 Pink-feet grazing to the north of the village.

Neville Crowther



Bawsinch and Duddingston Loch

Date 17th March

Leader Joanie McNaughton

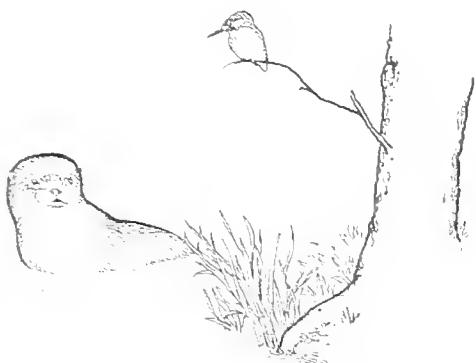
The last time the Nats visited this SWT Reserve was nine years ago almost to the day. This time we were ably led by the Convener, Ken Knowles. With such a large group as we were, it was just as well Stuart Maxwell came along with Ken so that we could split up.

I was in Stuart's group, and we went straight to the hide. We had excellent viewing across the loch, on a sunny day with some high cloud. First off, between the gate and the hide, we had three of the Tits, Long-tailed, Coal and Great, and also Wren and Goldfinch. From the hide I counted 5 Canada Geese, approximately 30 Greylag and 1 Canada x Greylag hybrid. It was lovely to see so many Dabchicks, 5 pairs and 1 single bird; and hearing them whinnying across the water is such an evocative Spring sound. Sadly, Great Crested Grebes have not been reported for a couple of years.

I had seen a good number of Teal here on my recent in February, but only 1 pair today. They do not breed here, with non-breeders usually returning in July. We also saw 5 Cormorant, Coot, Moorhen and I counted 8 mixed male/female Goldeneye. For me, the highlight of the morning was some 17 Mute Swans fighting, possibly for territory, literally biting lumps out of each other it seemed, or were they displaying and attempting to mate with an unwilling pen? It was difficult to tell what was going on amongst the splashing of water and the flurry of wings and feathers. There are in fact two dominant pairs, holding territory at each end of the loch. The loch is home to several species of fish - Carp, Perch, Roach, and Eel, and it is thought that Stickleback and possible Trout come up the Figgate Burn, which, when in spate, flows into the loch rather than out.

Four disappointments were the no-show of Bittern, Water Rail, Kingfisher and Otter. A Bittern, present every winter for 7-8 years about 20 years ago, returned this winter and had been showing well throughout January and February but had gone by the time of our excursion. Two Water Rail had been reported throughout the winter, and I saw one bird on my recent; sadly not today. Otters too had been reported when the loch was frozen, with a mother and two cubs regularly seen out playing on the ice. We were told the Otters were still around, but we did not see them during our visit.

Stuart had a webcam set up somewhere on the Reserve and showed us some brilliant footage of the Otters and other Reserve wildlife at night. There was no sign either of Kingfisher on this visit, although known to nest.



KINGFISHER and OTTER

Walking round the Reserve, we passed the Rookery and the Jackdaw colony with 100s of resident Jackdaws. Stuart explained that 14 Greylag Geese were introduced on Goose Green which was specially kept clear for them. However, the enlarged flock now go into the Pentlands to breed. The area is now a wildflower meadow to encourage Butterflies - Ringlet, Small Copper and Holly Blue; with Northern Brown Argus present outwith the reserve on Arthur's Seat, its food plant being Rockrose.

Sparrowhawk nest on the Reserve but were not seen. However we did see 2 Buzzards displaying overhead. 5 pairs of Stoek Dove nest here too. En route to the Heronry, Stuart explained about the programme for removing introduced and invasive plants and trees. Sycamore *Acer pseudoplatanus* is being ring-barked; New Zealand Pygmyweed *Crassula helmsii* is being cleared from the ponds; Hawthorn is being cut back in sections as it is getting too scrubby for Warblers; red-stem American Dogwood *Cornus sericea* is being cut twice a year and treated to prevent regrowth; Himalayan Balsam *Impatiens glandulifera* and Japanese Knotweed *Fallopia japonica* are under control or almost gone; Giant Hogweed *Heracleum mantegazzianum* keeps growing back but is easy to keep on top of.

Another highlight of the excursion was to see the Heronry from a tiny tent-like hide which took only two people at a time. Ten years ago 25 nests were occupied, then a year later when the Nats last visited, numbers dropped to 19 occupied nests. However, a month after this year's excursion, 33 occupied nests were reported, with young in most of them.

Whilst waiting and watching at the Heronry, I heard a Reed Bunting close by and saw Tufted Duck on the water, and a female Kestrel flying across the loch. We also saw an early Queen Buff-tailed Bumblebee *Bombus terrestris* on a Willow.

In the morning, Ken's group spent some time at the sandbank where they found a Bee Fly *Bombylius major*, which has a long tongue with which it flicks its eggs down a hole. Also there were Cuckoo Bees and Mining Wasps nesting. Stuart's depth of knowledge in this area too was invaluable. A Mining Bee mimic had us fooled, turning out to be a Fly *Tachina ursina*, which parasitises larvae of insects (probably including grubs of Mining Bees). Thanks to Stuart for finding an obscure Belgian website, which this time had a perfect match photo.

After lunch (yes all this in the morning!) Ken's group went to view the heronry, while the other group explored parts of the Reserve not already visited. This was when some of us were shown a currently empty Sparrowhawk nest, and saw a Great Spotted Woodpecker and heard a Green Woodpecker, the latter having been regularly reported recently.

I mentioned earlier the large colony of Jackdaws on the Reserve. I have the pleasure each day of seeing streams of Jackdaws flying the length of Relugas Road, going out to feed in the morning and returning at night. Some of them have even been stopping in my garden to feed, so it's a tick for the BTO GBW survey!

Finally I would like to take this opportunity to thank Ken Knowles for giving up his Saturday to lead us round the reserve and share his depth of knowledge with us, and to Stuart Maxwell for his time and for showing us his webcam footage!

Joanie McNaughton

Elie towards St. Monans and return

Date 28th April

Leader Molly Woolgar

Nine Nats met at 11am on a dry day with a cold wind in the Elie car park near Ruby Bay, where minute garnets could be found. Molly spent her family holidays in Elie where there used to be three hotels, but to-day there are none.

We started along the Fife Coastal Path towards the lighthouse (built by David Stevenson and commissioned in 1908) now no longer in use. Our next historical stop was at the Lady Tower built for Lady Jane Anstruther as her summer house above her small beach pool constructed so that the water was retained at low tide. She also had a changing room near the pool. For her privacy a bellman was hired to keep everyone away whilst she sea bathed!

After lunch in a sheltered spot in the sun, we continued along the coastal path to Ardross Castle (1370) ruins. The sandstone castle was built for Sir William Dishington. Beside it is Ardross Farm (18th century) in whose grounds is a rectangular doocot.

Our next stop was at the signpost (*1 mile Elie; 1 mile St. Monans*) and the third post pointed to a circular path. We followed it under the railway bridge to see if there were any Orange-tip Butterflies on a large patch of Garlic Mustard *Alliaria petiolata* one of their favourite food plants, but there were none.

Retracing our steps we continued towards St. Monans as far as Newark Castle (15th century) built in sandstone on a red sandstone strata. It was owned by the Sandilands family until 1661 when it was bought by David Leslie, 1st Lord Newark (Lord Abercrombie head of the Sandilands family having squandered the family fortune). We looked at the Newark Beehive Doocot and we made our way back to Elie.

Natural history of interest included birds such as Eider and Shelduck, Gulls and Sandwich Terns, Swallow, Kestrel, Heron, Skylark, Pipits and Wren. There were Primroses *Primula vulgaris*, Cowslips *Primula veris* and the brightly coloured Marsh Marigolds *Caltha palustris*. The find of the day was a few plants of the beautiful Meadow Saxifrage *Saxifraga granulata*. The only Butterfly seen was a Green-veined White.

We had refreshments at a fruit farm on the way home.

Alison Ramsay

Lochcote Reservoir

Date 5th May

Leader Jackie Muscott

The day was fine and quite warm when the sun was out, so about a dozen Nats met at Torphichen Preceptory for what was essentially a repeat of last year's excursion. Since it took place at almost exactly the same time of year, it was very interesting to compare the natural history.

In 2011, despite the cold midwinter, April and early May had been very warm and sunny, so both plants and insects emerged exceptionally early. This year we had a relatively mild winter and an exceptionally warm spell in March, so all was set for another early spring. But April and the beginning of May put paid to that, with more or less continuous cold north-east winds which held everything back.

The Lilac tree *Syringa vulgaris* which had been in full bloom last year with a Blackcap singing atop, was still in bud, as was the Cherry Plum *Pruinus padus* next to it. The marshes below, which had been pink with Cuckoo Flower *Cardamine pratensis*, were still grey and withered, and the Butterflies (Green-veined White *Pieris napi* and Orange Tip *Anthocharis cardamines*) whose larvae feed on this plant, and which were so abundant in 2011, were absent. (Though a couple of each was eventually noted.)

However a new and exciting discovery was in store by the reservoir: some large patches of Goldilocks Buttercup *Ranunculus auricomus* had been discovered there in 2011, so we went to have another look. The plants were in flower, but only just. Various members of the party got down on their knees to examine the very different basal and stem leaves, and then 'eureka!' someone shouted 'Adder's-tongue' and there it was! The more we crawled about (as carefully as possible) the more we found. There is an old record for this tiny Fern *Ophioglossum vulgatum* in the area, but that was in 1901 - so a wonderful new find.



ADDER'S-TONGUE FERN not seen here since 1901!

The birds noted were, I think, comparable with last year - but I leave that to Tom to report.

Last year on returning to the Preceptory we noted Brittle Bladder Fern *Cystopteris fragilis* growing among weeds on the wall of the car park. Later on the wall was sprayed, but I am glad to say the fern had survived in various crevices and was beginning to grow again. It's a lime-loving Fern, so the wall which was an old one, must have had old limey mortar.

Some of the party again ended the trip by enjoying the hospitality of George McDougall, one of our oldest members. He led us on many enjoyable excursions until quite recently, and had the happy knack of talking the Society's way into a number of private estates. So thank you George.

Jackie Muscatt

Birds at Lochcote

As we walked up the track to the reservoir Willow Warbler, Chiffchaff and Blackcap were singing in the mature, mixed woodland alongside. (They were still singing there, with a Wren when we returned four hours later.) There were Buzzards in the air almost the whole of the day, with a group of four spiralling overhead at one stage.

We had lunch by the dam once we reached the reservoir, and walking up the bank of the dam, we met half a dozen Swallows hawking low over the grass, feeding on a hatch of Mayflies. While we ate, more Buzzards flew across the valley in front of us, from time to time harried by Rooks from a colony visible at the top of the wood. David heard a Green Woodpecker yaffling in the distance, and as we went on towards the old Lochcote House site, it continued to call, and we all heard it.

Still at the reservoir, a pair of Grey Wagtails put on a fine display for us. They were making regular flights into the adjacent rough pasture, returning carrying food, perching on the fence, flirting and spreading their tails. Flying down into a deep, stone-built channel at the foot of the dam, they were obviously feeding young, and the nest was probably in one of the many weep holes in the channel walls or in the tunnel from which the channel was fed. When our group passed along the Wagtails' fence after lunch, the birds didn't really appreciate such close presence and retreated to the tops of the trees until we had gone, when they resumed their regular feeding flights. The reservoir itself was rather birdless; we saw only a single Cormorant, which flew off, and later a number of Herring Gulls and Lesser Black-backs flew in to bathe.

In the afternoon, on our way back to the car park, we passed a field that the farmer had been harrowing in the morning. David spotted a fine cock Wheatear, which showed up well against the background of freshly levelled soil; soon after, a female, possibly two, appeared. All fed eagerly on the disturbed ground, intermittently flicking up onto the hedge or fence. Another bird, seen more distantly at first, turned out on closer approach to be a female Whinchat. This didn't seem like suitable breeding habitat, and the birds were almost certainly on passage.

A cock Yellowhammer, bright as a Canary, joined the Wheatears: it was the last bird of the day and undoubtedly the most colourful.

Tom Delaney

Braid Burn
Date 9th May
Leader Mary Clarkson

Having followed the Braid Burn over the lowest slopes of the Pentlands and through Covenanters' Wood last year, we traced the next section through very different habitats, a housing area and a public park.

We saw the burn emerge from Covenanters' Wood via a culvert under Redford Road and almost immediately there were Giant and Common Butterbur *Petasites japonicus* and *P. hybridus* and a Salmonberry *Rubus spectabilis* on the bank, carried downstream from the wood where they had been so plentiful last year. Here, too, were heard a Song Thrush, a Blackcap and Willow Warblers. It was interesting to see the burn flowing through a built-up area of houses and schools, with recent flood defences in several sections, and yet with a Mallard racing us downstream and beautiful yellow Marsh Marigolds *Caltha palustris* in the water. A sharp-eyed Nat spotted a Hooded Crow in the middle of a playing field and after some discussion, it was decided that this must be a hybrid. Surprisingly, in a hollow a few metres from the burn, with blocks of flats and a shop on two sides was a small pond, well fenced off, containing Lesser Bulrush *Typha angustifolia*, Yellow Flag *Iris pseudacorus*, Watercress *Nasturtium officinale* agg. and Bogbean *Menyanthes trifoliata*.

Braiburn Valley is a public park well maintained by the city with the help of local 'Friends', and well used by those who live nearby. The sloping sides of the valley are mainly grassy but with plantings of Wild Cherry *Prunus avium* and Rowan *Sorbus aucuparia*. By the burn are Alders *Alnus* sp. and Willows *Salix* sp. and the stage of the old open-air theatre is surrounded by Hornbeams *Carpinus betulus*, not common hereabouts. There were only a few Butterburs in the park and no sign - yet - of Salmonberry. As we made our way to the gate, a clump of beautiful Primroses *Primula vulgaris* in full bloom cheered us on our way.

Mary Clarkson

Dawn Chorus, Bush Estate
Date 12th May
Leaders Lesley Fairweather & Kevin Ingleby

Fifteen members assembled at 9am on a cool morning typical of this spring. Our leaders explained that sound rather than sight is often the best way to locate birds proclaiming their nesting territories.

The walk began following the track through the riparian woodland alongside the Glencorse Burn. We were quickly immersed in a cloak of bird sound, with Wrens, Chiffchaff and Blackcaps noisily proclaiming ownership of their patches. The first of three pairs of Buzzard 'mewed' as they soared overhead at tree-top height. Many Jackdaws making explosive 'chacks' were gregariously winging through the trees to nest holes in the larger ones. A Mistle Thrush gave a rattling alarm call at our presence. The commoner birds of woodland reminded us of their prominence, with Great Tits demonstrating their versatility with several different calls and songs, as well as the well known 'tea-cher tea-cher'. Robins and Blackbirds were always heard close by, but largely ignored. The cock Dunnock's sweet little song jogged our memory and Greenfinches 'wheezed' in the tree tops. We watched the nest hole of a Nuthatch vainly for an occupant using it. It has been a successful breeder here during the last few years. Cross my heart!

As we moved on, a Nuthatch unmistakably swept by, never to be seen again. A small pond, stream-fed in a gully between giant exotic Conifers, introduced some botanic interest to our day. A large Lady's Smock with fleshy green leaves and strong lilac petals was identified as the Great Cuckoo Flower *Cardamine raphanifolia*, and nearby dozens of shuttle-cock tufted plants of Ostrich Ferns *Matteuccia struthiopteris* filled the bottom of the hollow. We were quickly drawn back to the real objective of our visit by Malcolm discovering a Spotted Flycatcher feeding above the stream from overhanging branches of Beech trees. This late summer visitor is in decline and somewhat elusive. We were to find another pair later in the morning, which was a satisfying and unexpected record.

We spent about 15 to 20 minutes in this same spot, as two Goldcrests in constant motion, four Treecreepers exploring the rough bark of a towering old Western Hemlock *Tsuga heterophylla*, and a loudly calling Stock Dove all occupied our attention.

Soon afterwards the prediction of Nuthatch sightings was satisfied when a pair of birds were watched carrying fecal sacs and food from and to the nest hole.

At the pond known for its Newts, Kingcups (Marsh Marigold) *Caltha palustris* were in flower and Water Lilies *Nymphaeaceae sp.* and Water Horsetail *Equisetum fluviatile* were newly in leaf, although only last year's Reedmace *Typha sp.* was visible. By 1pm birdsong had diminished and those without lunch headed off home, as a Goldcrest gave a territorial flourish to their departure. The sun shone on the sandwich eaters, as we counted up 28 species for the morning; a good total.

Neville Crowther

Arthur's Seat

Date 16th May

Leader Stuart Monro

On a blustery cool evening we gathered on the steps of Our Dynamic Earth. With one or two having parking difficulties we eventually numbered a very creditable twenty members. Stuart explained that we were going to be given a series of tasks in order to discover something of the geological history of the Arthur's Seat volcano. Most people have a stylised view of volcanoes derived from images like Mount Fuji. However, our volcano is 360 million years old and the ravages of geological time have contorted and drastically changed the classical volcanic cone, beyond recognition.

We walked to a disused quarry to the west of Hunters Bog where our inquisition began with the structures present in the sedimentary sandstones. Ripple marks were identified, with a symmetrical vertical cross section, which implied aeolian deposition, i.e. by wind not water, the conclusion being that desert conditions existed at the time of this layer's formation. Another slab, with a raised polygonal pattern on the bedding plane, was deduced to be a surface which had dried out, producing shrinkage cracks. Yet another slab was thought to be upside down, confirmed by the current bedding being inverted. So the detective work continued with the help and stimulus of Stuart's questioning.

Crossing the bog to its east side we focussed on a sill formed by an intrusion of magma between layers of volcanic ash. We were asked to find newly broken surfaces without the encumbrance of any recent 'biology'. There was discussion about crystal size, being determined by the speed of cooling and what could be inferred from that, in sorting the order of events. Close by we were able to recognise a fault where the rocks on one side had been lifted relative to the other. The weakness of the fault line had formed a drainage channel where a spring known as St. Anthony's Well emerges. The lateness of the hour and the impending rain clouds forced us to charge uphill to the end of the Radical Road, where a site known as 'Hutton's Section' is highlighted. It shows a series of rock strata which lie unconformably† upon each other.

In 1787 the 'father' of Modern Geology, James Hutton, recognised that unconformities† of the type shown here would be responsible for extending the length of geological time from the six thousands years calculated by Archbishop Ussher to millions of years. His influence resulted in Charles Lyell writing the '*Principles of Geology*' in 1830 which Darwin took with him on the Beagle in 1835. Hutton was thus one of the most influential members of the Scottish Enlightenment.

We closed with a quick vote of thanks, and as the rain began, flew in all directions to find our cars, or in Stuart's case dash to Waverley to take the sleeper to London for what could not be a more entertaining or strenuous day in London.

Neville Crowther

† - Geological terms: 'consisting of a series of younger strata that do not succeed the underlying older rocks in age or in parallel position, as a result of a long period of erosion or non-deposition.' (Collins Dictionary) NC

Pressmennan Lake Circuit

Date 19th May

Leader Malcolm Lavery

It was another ‘unseasonably cool’ day as about a dozen Nats set out for a circuit of Pressmennan Lake in East Lothian. This area of mixed woodland, currently managed by the Woodland Trust, is known for its mature Oaks and the biodiversity they bring.

Three Greylags flew overhead as we started off from the car park at the east end of the wood, and not long after some interest was stirred by the sudden appearance in rapid flight of what was assumed by its posture to be either a Mandarin or Wood Duck. A Dabchick could be heard trilling occasionally, but it kept well hidden by the water’s edge. Perhaps the most exciting bird find was a family of young Owls in a nest in a split tree.

The usual woodland spring flowers were out, with bright purple patches of Bugle *Ajuga reptans* making particularly attractive displays. Old woodland indicators included Wood Sedge *Carex sylvatica*, Wood Anemone *Anemone nemorosa*, native Bluebell *Hyacinthoides non-scripta*, Sancle *Sanicula europaea*, Woodruff *Galium odoratum* and Wood Speedwell *Veronica montana* (just coming into flower). Dog’s Mercury *Mercurialis perennis* was also abundant, with female plants seeding well.

Down at the beginning of the lake, prominent mounds of the uncommon Tussock Sedge *Carex paniculata* were growing healthily, in the midst of a widespread covering of Brooklime *Veronica beccabunga*, and an unknown Iris-like plant*.

Other plants of special interest were the rare woodland grass Wood Melick *Melica uniflora* and Alternate-leaved Golden Saxifrage *Chrysosplenium alternifolium* which is much less common than Opposite-leaved Golden Saxifrage *C. oppositifolium* which was abundant in damp places but a bit past its best. The introductions Honesty *Lunaria annua*, provided colour here and there, and there were quite a few garden flowers near the house, the most interesting and impressive being Giant Rhubarb *Gunnera sp.* which had leaves up to 2m across.

Roe deer tracks were seen along the lakeside path, and among the plants noted here was Wall Lettuce *Mycelis muralis*.

Malcolm Lavery

* It turned out to be Sweet Flag *Acorus calamus*.

Visit to the Royal Botanics Garden Nursery

Date 23rd May

Leader Heather McHaffie

We had a very enjoyable evening with Heather. See page 3.

Burnmouth to Eyemouth

Date 26th May

Leader Lyn Blades

In the book that he co-authored with D. G. Long in 1990 entitled ‘*The Botanist in Berwickshire : An Annotated Check-List of the Flowering Plants and Ferns of Berwickshire*’ Michael Braithwaite describes the coast around Burnmouth in the following words: ‘The coast with its cliffs and sea braes provides a largely unbroken strip of natural grassland and maritime heath where *Primula vulgaris* and *Hyacinthoides* are abundant for about 30 kilometres from Lamberton to Dunglass. Below Lamberton the grasslands are base-rich, with *Koeleria* and *Carlina*, while the wet flushes contain *Equisetum telmateia*, *Lythrum salicaria*, *Eupatorium cannabinum* and *Carex pendula*. The railway cutting behind has been colonised by *Pastinaca*, *Valerianella locusta* and *Bromus erectus*. The braes north of Burnmouth are the most colourful in Berwickshire with *Vicia sylvatica* and *Geranium sanguineum* together with *Poterium sanguisorba* and long-established *Petroselinum crispum*.’ And ‘at Eyemouth, the headland behind Gunsgreen has a fine spring flora with *Primula veris*, *Orchis mascula* and a late-flowering colony of *Scilla verna*; it also retains a small colony of *Schoenus nigricans*.’

In a day of unbroken sunshine and cloudless skies, Lyn led us north from Burnmouth along the meandering cliff-top path that eventually descends to the old fishing village of Eyemouth. Rockrose *Helianthemum nummularium* interests the entomologists as much as the botanists, and some patches of this plant in Burnmouth were examined unsuccessfully for Caterpillars of Northern Brown Argus Butterflies *Aricia artaxerxes*. An unusual plant growing by the roadside was garden Parsley *Petroselinum crispum* which Michael Braithwaite mentions above. As we left the village, Wall Brown Butterflies eluded identification until one settled, appropriately, on the wall that encloses a cereal field. Eight years ago a crop of Borage *Borago officinalis* was grown here and some Borage leaves persist as field weeds. The path slowly climbs as Burnmouth is left behind. Gradually, one plant replaces another as the dominant species in the cliff-top vegetation, and each replacement is marked by a subtle colour change. Rockrose is replaced by Kidney Vetch *Anthyllis vulneraria*, its yellow sward interrupted by spikes of Early Purple Orchid *Orcis mascula*.

Meadow Saxifrage *Saxifraga granulata* appears here and there, the large white flowers of Sea Campion *Silene uniflora* sprawl over rocky outcrops, and patches of Wood Vetch *Vicia sylvatica* await the month of June when they, too, will come into flower. The dry flower heads of last year's Carline Thistle *Carlina vulgaris* have withstood the gales of winter and spring.

The largest seabird colonies are further north at St Abbs, but some Guillemots, Fulmars, Herring Gulls and Kittiwakes, are nesting below us on the cliffs. The bird watchers glimpsed Wheatears, Linnets and Stonechats before they disappeared behind Gorse *Ulex sp.* and Blackthorn *Prunus spinosa*. Butterflies and moths were equally lively in the hot sunshine. There are lots of Orangetips, Green-veined Whites, and more Wall Browns, and occasional Small Heaths, Silver-Y moths *Autographa gamma* and a single Small Tortoiseshell. A Fritillary caterpillar, black and unattractive, was munching a violet leaf with as much vigour as if it had just ended a period of fasting. By contrast, a Garden Tiger caterpillar snoozed on a Dock leaf.

Michael Braithwaite mentions Bog Rush *Schoenus nigricans* being at Gunsgreen in 1990; it is still there, but the Spring Squill *Scilla verna* was not seen. It had probably passed its flowering stage and would therefore be difficult to find. This was close to our destination, Eyemouth, and we were grateful for its shade, ice cream and other comforts at the end of a five hour walk in hot sunshine.

David Adamson

Gailes Marsh

Date 2nd June

Leader Neville Crowther

The coach journey was smooth and easy considering the distance we had to travel and that we needed also to traverse our two largest conurbations. We arrived to a blustery cool day, which was not what we wanted as insects were one of the main target groups.

A complex of post-industrial sites on the estuary of the River Garnock were the 'canvas' for some forward thinking on the part of local authorities in Stevenson and Irvine in the post war decades. Several sites were conserved as Nature Reserves, many managed by Scottish Wildlife Trust. We visited two of them: Gailes Marsh and Shewalton Sand Pits.

At Gailes the main interest was in the plants of what had been inter-dune slacks and attendant Pine scrub. In the Pines we found several tufted Royal Ferns *Osmunda regalis* standing proud on mounds of rhizomes. They exhibited both sterile and fertile fronds. They were new to many of our party. The sandy grassland had at some time been a war-time radar station for Prestwick Airport just to the south. It had also been planted up with conifers in ridges, which are still a feature of the site. The recovery of the herb rich potential has been encouraged by SWT. Former dune slacks had the following interesting plants, typical of dry grassland with base rich nutrients: the Hair Grasses *Aira praecox* and *A. caryophyllea*, Birdsfoot Trefoil *Loton corniculatus*, Field Woodrush *Luzula campestris*, Birdsfoot *Ornithopus perpusillus*, Sand Sedge *Carex arenaria*, a Dog Lichen *Peltigera membranacea*, Mouse-ear Hawkweed *Pilosella officinarum* and Heath Speedwell *Veronica officinalis*. Moonwort *Botrychium lunaria* had been seen on the recce, but we missed it on our visit. It always is a bit devious.

After turf stripping, many new plants of Kidney Vetch *Anthyllis vulneraria* had been seeded into sandy soil and they now flower successfully. There are imminent plans to reintroduce Small Blue Butterfly larvae, probably this year, from sources in Northern Ireland. This Vetch is the exclusive food plant of these caterpillars.

Many of the sandy hummocks in the grassland slacks had colonies of Yellow Meadow Ants *Lasius flavus* ideal for grooming Blue Butterfly larvae. On this day however moths were more common than Butterflies, with the Grass Rivulet *Perizoma albulata* present in large numbers. A rare find by Laura Edwards was the Red-necked Footman *Atolmis rubicollis*. An artificial Sand Martin breeding bank had birds visiting a month before, but nesting seemed delayed by the continuously bad weather. Also awaiting the Martins were bird fleas by the dozen in most burrow entrances.

After lunch we drove a kilometre down the road to Shewalton Sandpits. Almost before we had entered, Tom had photographed the ‘fly of the dead’ *Cynomya mortuorum*, distinguished by its metallic green abdomen and white-yellow jowls and much appreciated by forensic scientists. Remarkably the only other record on the NBN gateway map of Scotland is at this same site - Shewalton. The sandpits had been fashioned out of a series of industrial settlement tanks, which had been planted with a large number of aquatic species. Bladderwort *Utricularia sp.* was found in the shallows amongst Reed Mace *Typha latifolia* and Water Milfoils *Myriophyllum sp.* A Stonewort *Chara sp.* was new to many of our party. The distribution maps from Scotland have such sparse registrations for all Stoneworts that the exact identity is not even guessable. In shallow but open water, Bottle Sedge *Carex rostrata*, Bogbean *Menyanthes trifoliata* and Spike Rush *Eleocharis palustris* were emergent. Where the succession had progressed further, blankets of *Potamogeton* and *Sphagnum* formed colourful traps for the unwary. The ‘reedbeds’ and surrounding carr are attractive to passerines. Warblers seen and heard included Blackcap, Sedge and Willow Warblers, and a few Reed Buntings. We continued our exploration with a wander through the adjacent woodlands and through the riparian vegetation of the River Garnock, but it was soon time to return to the coach, to try to beat the rush hour.

Thanks are due to Gill Smart, SWT manager for 17 Ayrshire reserves, who showed Joanie and me around both sites early in May.

Neville Crowther

ENHS Weekend Excursion to Barony College

Date 08-10th June

Friday 8th June

Applegarthtown Wildlife Sanctuary (drizzle then heavy rain)

Immediately on arrival we heard a Nuthatch calling; sadly not to be seen, but what a great start to the weekend. En route to the hide, the first thing we noticed were the Black-headed Gulls noisily screeching overhead. Then a small party of Tree Sparrows were observed on and around a bird feeder. A constant this Spring has been the presence of Blackcaps everywhere and it was no different here. From the hide, there wasn't much to see on the water apart from Black-headed Gulls (some sitting on eggs, some with chicks of different ages), a few Mallard, a Moorhen and then we saw the Sand Martins. The highlight of the visit was the artificial Sand Martin nesting bank, the design and building of which began in 1984, by Bobby Smith. A ten year research programme, which was completed in 2006, was carried out into parasites and species density and the annual ringing programme saw the 10,000th Sand Martin ringed in 2010. We were fortunate indeed to bump into Bobby Smith himself with Davie who had worked alongside him on the wall for many years. We were even more fortunate to be invited ‘behind the scenes’ to see exactly how the eggs and chicks in their nests are monitored and to hear about how each chick is ringed before fledging. Bobby explained the process of building the nesting bank, how extra protection was put in place to keep the nest holes totally draught-free, down to the precision of annotating each nest's progress. We were able to photograph a nest with at least four newly hatched chicks, looking like tiny skinned rabbits. An egg and an older chick were briefly taken out for us to photograph. Bobby told us that sadly so far this year only 34 nests are occupied out of a total of 150, and cold eggs were being found in some of those 34.

Castle Loch, Lochmaben (heavy rain)

We visited Castle Loch at Loch Maben where we had lunch. The castle itself is of considerable historical interest with quite well preserved stonework considering its antiquity. It was built by Edward I in 1298 to replace the original castle of the Bruce's nearby, and was taken and retaken alternately by Scots and English armies for a few centuries until, after the Union of the Crowns in 1603, it fell into disrepair.

The rain was still torrential in the afternoon, but from the hide we saw 2 pairs of Great Crested Grebes, a much reduced number from previous visits made by members. On the far side we saw about 50 Mute Swans. All round the loch, Wren, Reed Bunting and Sedge Warbler were singing in the rain, with good views of all. Along the path Great Spotted Woodpeckers were heard and seen, at least six individual birds, I reckoned. There was not much colour in the landscape, but one of the inlets was filled with Yellow Water Lilies *Nuphar lutea* which we admired from under our hoods.

In late afternoon we all drove to Barony College where we were allocated our very pleasant rooms. The grounds are extensive, well-wooded and with nature trails around two lochans.

Joanie McNaughton

Saturday 9th June

Balcary to Rascarrel circular walk
Leader Neville Crowther

Botanical aspects:

Although separated by only some 100 miles, the plant communities of the Solway Firth cliffs from Balcary Point to Rascarrel Bay differ markedly from those on the east coast. Two weeks previously a group from the Society had admired the carpets of Rockrose *Helianthemum nummularium* and Kidney Vetch *Anthyllis vulneraria* above the Berwickshire cliffs north of Burnmouth. Both of these plants were also present on the Solway, but they were in the company of some plants that are confined, in their Scottish range, to the south-west coastline.

The first of these was on the wall facing the car park outside the Balcary Hotel. This was the curious Wall Pennywort *Umbilicus rupestris*, larger plants of which were also lining the short lane leading away from the car park. In the same lane was another southern plant, the Soft Shield Fern *Polystichum setiferum*.

After crossing a field, in which Jackie found Prickly Sedge *Carex muricata*, and following the path on its muddy ascent between woodland gardens we reached the start of the interesting cliff-top plant communities. Dyer's Greenweed *Genista tinctoria* is a Pea with spikes of yellow flowers. It was found almost as soon as we left the shade of the trees and was present along the cliff edges until they ended at Rascarrel Bay. There was a local abundance of Tawny Sedge *Carex hostiana* growing with Heath Spotted Orchid *Dactylorhiza maculata* ssp. *ericerorum* and the closely-related Northern Marsh Orchid *D. purpurella*.

In places there were saltmarsh plants growing high above the coastline. Examples of this were Sea Milkwort *Glaux maritima*, Brookweed *Samolus valerandi*, Sea Rush *Juncus maritimus*, Saltmarsh Rush *J. gerardii*, and Black Bog Rush *Schoenus nigricans*. Jackie found an unusual umbellifer, Parsley Water Dropwort *Oenanthe lachenalii*, Sea Lavender *Limonium vulgare* and Sea Purslane *Atriplex portulacoides*, all on the slopes above the cliffs. On rocks were the white flowers of English Stonecrop *Sedum anglicum*. These plant communities contrasted with patches containing some distinctly acid plants that are found in the Pentlands, including Tormentil *Potentilla erecta*, Ling *Calluna vulgaris* and Bell Heather *Erica cinerea*. Almost everywhere we found spikes of Hair-grasses, Crested Koeleria *macrantha* and at one place saw Early Aira *Aira praecox* and Silvery *A. caryophyllea* growing together.

As the path descended from the highest point of the cliffs, we saw the deep magenta flowers of Bloody Cranesbill *Geranium sanguineum* and much more Dyer's Greenweed. After admiring the skeleton of a dead horse, or red deer, lying at the base of the cliffs, we reached a low-lying saltmarsh, which had its own plant community. Among the less common plants in the marsh were Skullcap *Scutellaria galericulata* and Gypsywort *Lycopus europaeus*, with the invasive Sea Radish *Raphanus raphanistrum* ssp. *maritimus* growing by the path. On the gentler slopes above the marsh the Bracken formed neat lines like rows of potatoes in a field.

We left the coastal path near an old barytes mine and followed a path inland that brought us first to Loch Maekie, and then across the base of the headland to the ear park by Baleary Hotel. En route we found Sand Spurrey *Spergularia rubra*, but this walk's botanical interest had been predominantly coastal and we strode from Loeh Maekie to the ears with scarcely a pause.

David Adamson

Note by Jackie Muscott: Wall Pennywort is doing well on some damp rocks on Blaeckford Hill. It first appeared a few years ago (presumably planted) but there are now around 100 flowering spikes.

and the Moths and Butterflies:

Both July Belle *Scotopteryx mucronata* and bright green Forester Moths *Adscita statices* were momentarily caught for identification. Their rarity meant they were new to everyone, but the pretty Chimney Sweepers *Odezia atrata* were common wherever their larval food plant Pignut *Conopodium majus* grew. Amongst the Birdsfoot Trefoil *Lotus corniculatus* we found a few caterpillars of Common Blue, with a few Wall Butterflies flying about. In Scotland the latter are common only along this coastline.

and the Birds:

Leaving the ear park at Baleary, the path took us up through some mixed woodland with Wren, Willow Warbler, Blackbird, Coal Tit, Golderest, Blaekape and Garden Warbler all singing like mad and flitting around gathering food to take back to young. We reached a field with Pied Wagtail and Meadow Pipit being seen here plus three Corvids, Rook, Jackdaw and Carrion Crow.

Along the path we saw pairs of Linnet, Meadow Pipit, and Skylark, all at various stages of the breeding cycle – displaying, gathering nesting material, and food for nestlings. One eock Stonechat was seen here. Looking down the cliffs we saw Guillemot, Razorbill, Fulmar, and Kittiwake both on nests and on the sea or flying overhead. Three Lesser Blaek-baeked Gulls were seen alongside a number of Cormorants. One of the Cormorants was in breeding plumage showing its white thigh patch. We also noted a possible Chinese subspecies of Cormorant, with silver feathering around the throat; or possibly it was a British bird with feather colour aberrations. Along the cliff top too, we saw pairs of Roek Pipits collecting food material amongst the Sea Pink *Armeria maritima* patches. Highlight for me from the cliff top was to see a Tystic (Blaek Guillemot) posing nicely on a rock below for us all to see its red legs and feet, and white oval wing patch.

Moving down from the cliff top onto the rocky shore we were treated to a number of Goldfinsch and the territorial songs of Whitethroats in the cliff scrubland. We reached the end of the beach where the path turned inland towards Loeh Maekie, where we caught and identified several Odonata. A pair of Ravens were spotted feeding on the ground, then being mobbed by a Crow. Chiffchaff and Reed Bunting were heard singing on the other side of the loeh. The final stage took us past a cottage where we watched Swallows and House Martins going in and out of nests under the eaves.

Joanie McNaughton

Kirkconnell Flow

En route back to Barony, we stopped at Kirkconnell Flow NNR, a raised bog alongside the banks of the Nith. The dome of the bog is about 2km long and 1km wide. It suffered considerable deterioration last century by attempts to cover it with coniferous plantation. Some success has been achieved at reversing this damage. Drainage channels have been blocked and the conifers have been stripped out of the peat. The bog vegetation, including Sphagnum, Sundews and Cranberries is slowly returning, but Heather still dominates the dome. We were able to cross the 'lag' but searched in vain for Adders. Tom and Neville did net half a dozen species of moth characteristic of this habitat such as Grass Wave *Peconia stigillaria*, Common Heath *Ematurga atomaria*, Speckled Yellow *Pseudopanthera macularia* and Common Carpet *Epirrhoe alternata*. A late flying Green Hairstreak Butterfly was a very acceptable addition to our list of Lepidoptera.

Here Joanie saw a Goshawk skimming the treetops. Similar in size, but shorter wings, a longer tail and pale underneath with barring, definitely not a Buzzard, and too big for Sparrowhawk. There were loads of Great Spotted Woodpeckers. We saw and heard at least six birds, presumably family groups. Six Crossbills were also spotted.

After dark and after dinner, Neville set his moth trap out in the grounds of Barony. An early dawn (around 4am) revealed a small catch including White Ermine, Clouded Border and Light Emerald.

Sunday 10th June

Ken-Dee Marshes

Before leaving Barony, most of us watched the start of a sheep-shearing contest in one of the large barns - a surprise bonus. The day started well with Red Kites being seen before we even got to the Reserve. Clearly they are doing very well in this area, near to the release site at Bellymaek farm. The path to the two hides was most rewarding. Excellent views of the following: Redpoll; Treeeereper; a family of four Nuthatches; Great Spotted Woodpeckers in evidence all round us; a party of about twenty Long-tailed Tits; a family of three Willow Tits with the parents feeding the newly fledged bird; Redstart picking up insects along the edge of the path in front of us; and two pairs of Pied Flyeateher at nest boxes. Willow Warblers were singing everywhere and at the second hide we were treated to eye-level views of Swifts and Swallows, with Reed Bunting singing in the background. Not much of note on the water, but a Curlew was heard nearby.

On our return to the car park, Dorothy told us that she had been watching a Field Mouse feeding on crumbs by the car, alongside some Chaffinches. No sooner said than the Field Mouse duly appeared for those present to see. A nice end to the weekend!

Joanie McNaughton

Caerlaverock Splinter Group

Mary Clarkson and I headed for Caerlaverock on the grounds that it was fairly close and being coastal perhaps more likely to be sunny. We parked at the west end of Castle Woods and were greeted by a chorus of birds: Song Thrush, Wren, Yellowhammer and a very noisy Sedge Warbler bounching about in a nearby willow.

We decided to explore the merse first - a lush grassy area which gradually gets more brackish until it becomes a proper saltmarsh nearer the sea. What with the wet areas and the cattle poaching, it was not easy going, but we were rewarded by lovely patches of Ragged Robin *Silene flos-cuculi* plus Hemlock Water Dropwort *Oenanthe crocata*, just coming into flower, and the remains of Cuckoo Flower *Cardamine pratensis* - amid the Rushes, Grasses and Sedges. The most interesting of the latter included False Fox Sedge *Carex otrubae*, Brown Sedge *C. disticha* and Slender Spike Rush *Eleocharis uniglumis* (despite its name a member of the Sedge family).

As we approached the sea Soft Rush *Juncus effusus* gave way to the more spiky Sea Rush *J. maritimus*, and Marsh Arrowgrass *Triglochin palustris* to Sea Arrowgrass *T. maritima*, while Sea Clubrush *Bolboschoenus maritimus* put in an appearance in the deeper channels. Outside the grazing area we found ourselves on a sandy shelf among Tufted Vetch *Vicia cracca* and Birdsfoot Trefoil *Lotus corniculatus*. Here we had luneh, serenaded by Skylarks, and looking out across the saltmarsh which was pink with Thrift *Armeria maritima*.

Beside the Thrift the saltmarsh had Sea Milkwort *Glaux maritima*, Greater Sea Spurrey *Spergularia media*, Distant Sedge *Carex distans* and Long-bracted Sedge *C. extensa* all in flower, while Seablite *Suaeda maritima* and Glasswort *Salicornia* sp. were just coming up.

Returning to the wood Mary was delighted to find an uncommon rust *Uromyces lineolatus* on the Hemlock Water Dropwort. The alternate host is Sea Clubrush so both plants need to be present. In the wood itself we encountered large quantities of Remote Sedge *Carex remota*, patches of Climbing Corydalis *Ceratocapnos clavicolata* and Wood Millet *Milium effusum*, plus Pignut *Conopodium majus*, Yellow Pimpernel *Lysimachia nemorum* and the remains of Bluebells *Hyacinthoides non-scripta*.

At last we approached the castle, a most impressive building. A seat of the Maxwells it was rebuilt in the 17th century and replaced a previous castle the remains of which can be seen nearby. It's surrounded by a large moat on which floated Common Water Crowfoot *Ranunculus aquatilis* and Broad-leaved Pondweed *Potamogeton natans*. It was bordered by Reed Sweet Grass *Glyceria maxima* and patches of Yellow Flag Iris *Iris pseudacorus* where large numbers of Damselflies (Azure *Coenagrion puella* and Blue-tailed *Ischnura elegans*) were sunning themselves.

At the Visitor Centre we found loos, tea and eakes, all very welcome, and enjoyed the latter while watching Swallows and Jackdaws flying around the castle where they were nesting. Then it was back through the wood to the accompaniment of the harsh cry of a Jay as we approached our car. We stopped for a meal at Moffat on the way home, and missed the rain. So ended a most enjoyable holiday.

Jackie Muscott



Coire an lochain
Cairngorms



Gailes Marsh
ID discussion



Pressmennan Lake in May



Catkins in February
Valley Field



Dawyck- hands-on lichenology



Sawfly larvae
create interest
Donald Rose Res.



Brander Haughs-
the briefing



Looking towards
Petticowick



Scratching heads
Plean



John 'Burry' Parker shows his catch



Can't see the trees for the wood
Dawyck



Stuart Monro sets a task
Arthur's Seat



Lammer Loch
wayside disputation



Black Darters



White Ermine
playing possum



Commoner



Small Blue



Yarrow Plume Moth



Clouded Border



Chrysis
on Scabious



Emerald Damselfly



Sawfly larvae



Elephant Hawkmoth



Wall butterflies copulating



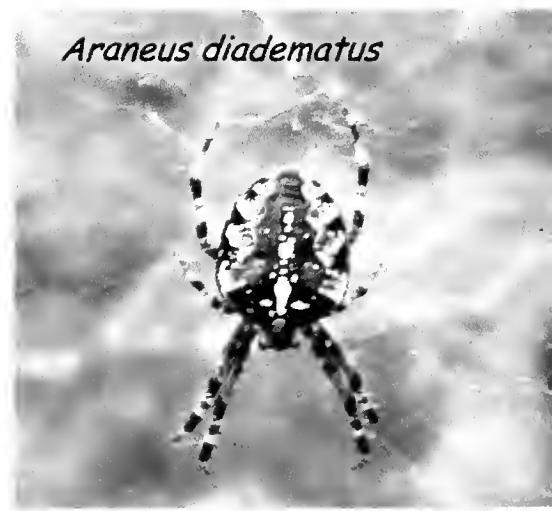
Red-necked Footman



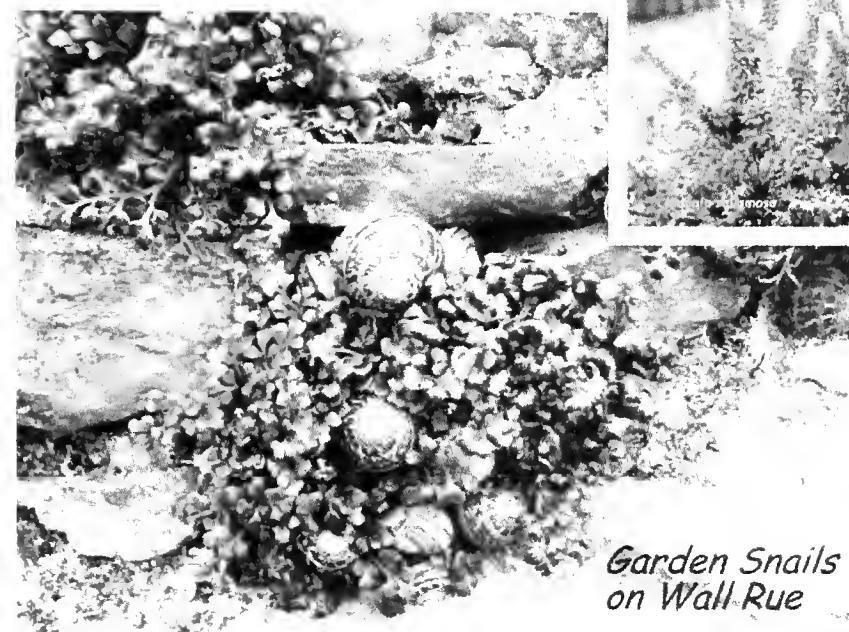
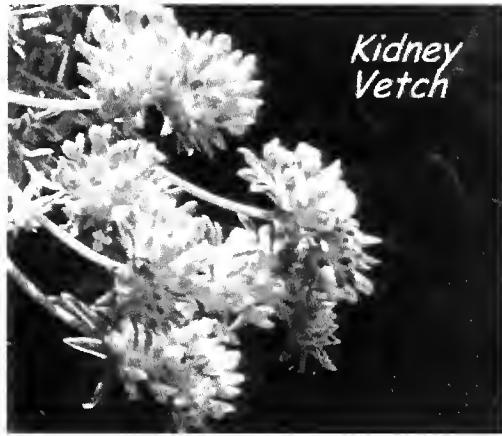
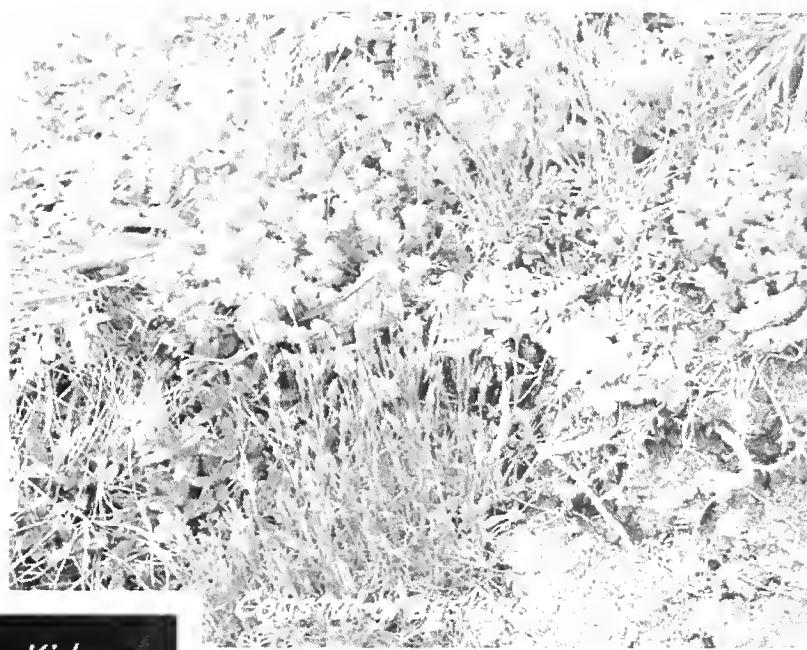
Large Red Damselfly



Long-horned Beetle



Araneus diadematus





Red Kite



Waxwings



Buzzard



Whitethroat



Meadow Pipit



Blackcap



Wheatear



Mute Swan



Newts in Calder Wood

Date 16th June

Leader Peter Leach

Despite the wet weather and the forecast for even more heavy rain five members of the Society were happy to take full advantage of a hands-on experience with the Newts which have taken up residence in the ponds in Calder Wood.

Several ponds have been created throughout the woodland for the benefit of the Newts. The evening prior to the outing Peter Leach had set traps in four of the ponds so that we could have an opportunity to have a close view of the Newts. The traps were simple and constructed from large transparent juice bottles where the upper half of the bottles had been cut off cleanly a few inches from the top. This part (without the stopper) had then been turned over and inserted inside the main body of the bottle - thus making a tight fit. A narrow cane was driven through both sections to hold the parts together. Once the cane was driven into the mud the bottle was held securely underneath the water at right angles to the cane. (The canes had already been marked so that they could be found later and easily removed.) The Newts and any other water creatures which had entered to explore the clear plastic 'cave' could then be removed without damage and inspected in plastic trays before being released. It was a most interesting experience to have a close view of these fascinating little creatures without unduly distressing them. Note that a licence must be obtained from SNH if surveys are to be conducted on sites with Great Crested Newts *Triturus cristatus*.

We admired the very large rear feet of one male Palmate Newt *Triturus helveticus*, checked the colour of the bellies of several specimens and learnt about the markings around the throat area. The throat of the Palmate Newt is flesh-coloured and does not have spots on it, whereas the throat of the Smooth Newt *T. vulgaris* is white or yellow and usually has black spots. (We did not find any of the latter species.)

We were encouraged to note the extent of the tails and the depth of the crests of the Great Crested Newts *T. cristatus*. After the breeding season the crest diminishes to become a ridge along the centre of the back. The male has a silvery strip along his tail.

Peter explained to us the various stages in development of the Newts and the differences between males and females. We also were shown eggs which a female had attached to a leaf of Water Forget-me-not *Myosotis scorpioides*: the leaf had been sealed over itself to form a protective 'envelope'. At least three large Water Beetles *Dytiscus marginalis* and many Midge larvae and pupae with breathing 'snorkels' intruded into our study of the Newts. The Beetles were removed fairly quickly so as not to further disturb the Newts. The only other amphibian found was a large dark Frog.

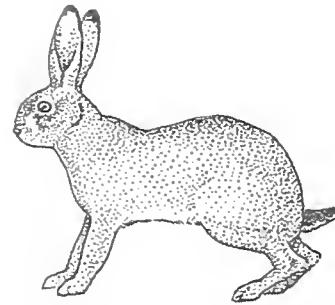
Each batch of Newts was returned safely to their pond before we moved on to the next one. All the bottle-traps and marker-sticks were retrieved for use another time. We then departed well-satisfied with our short expedition into the world of amphibians.

Bottle Trap



Eunice Smith

Easter Inch Moss, Bathgate
Date 20th June
Leader David Adamson



In *Plant Life of Edinburgh and the Lothians* (edited by Smith, and others, Edinburgh University Press, 2002) Jackie Muscott writes about the vice-county of West Lothian. She mentions three Orchids found on brown field sites, and concludes by saying West Lothian's plant life has been enriched by its industrial past. On this pleasant midsummer evening a group of seven found Jackie's conclusions to be correct.

After following a cycle track under the A89 and over the M8, we arrived at Easter Inch Moss Local Nature Reserve. To the east is the landscaped oil shale bing of Seafield Law, and behind the Birch trees and Willow there are open expanses of old peat workings, mainly low-lying but crossed by a grid of raised pathways. This raised ground provides much of the botanical interest. Moonwort *Botrychium lunaria*, Twayblade *Neottia ovata*, and Greater Butterfly Orchid *Platanthera chlorantha* are three of the plants that have established themselves here, often growing with common plants of acid moorland such as Ling *Calluna vulgaris*, Heath Milkwort *Polygala serpyllifolia* and Tormentil *Potentilla erecta*. The yellowish edges of the fertile fronds helped us to find several healthy colonies of Moonwort Ferns *Botrychium lunaria*, and the proximity of Twayblade plants suggests that both benefit from the same soil constituent or mycorrhizal fungus.

We visited the site about a week before the Greater Butterfly Orchids and Common Spotted Orchids *Dactylorhiza fuchsii* are at their best, but the deep purple flower spikes of Northern Marsh Orchids *D. purpurella* in damper areas were unmistakeable, even at a distance.

Jackie and Mary had arrived earlier than the main group and found an unusual plant near the A89 underpass after leaving the Moss. This was Grass Vetchling *Lathyrus nissolia*, a plant not listed in Plant Life of Edinburgh and the Lothians but recently found at Balerno. However they did not see the beautiful flowers of Common Wintergreen *Pyrola minor*, growing in the deep moss under birches.

Although the excursion's main natural history theme was botanical, some members of the group paid particular attention to the birdlife. Jacky Robinson's list of birds included Lesser Redpoll, a Cuckoo (silent, in flight), Grasshopper Warbler, Whitethroat, Reed Bunting and Blackcap, some being seen or heard on the walk to or from the Moss. Jackie and Mary also recorded Willow Warbler, Chiffchaff and Sedge Warbler.

Finally Roger entertained us, and no doubt some motorists, by climbing four of the 'Seven Sisters' row of pyramids that separate the cycle path from the M8. The pyramids are now home to a flock of purple sheep. These, some cattle, and a Brown Hare were the only mammals that we saw. The only amphibians were frogs. Overall this was a very rewarding excursion and should perhaps be repeated at the end of June or beginning of July when the Orchid display will be more spectacular.

David Adamson

The Soonhope Burn, Peebles
Date 23rd June
Leader David Adamson

As we gathered in the car park in Peebles, we were surprised to find it filling up and pipebands gathering. This was the Beltane Parade day, ironically given the weather, a festival to mark the beginning of summer. The forecast was 'unsettled' and the grade promised a longish hillwalk, so after some discussion we ended up with 5 on the excursion and a splinter group heading for a walk along the Tweed.

The route took us past the Castle Venlaw Hotel with some nice open grown trees in its grounds: Douglas Fir, Grand Fir, Oak and Ash. Blackcap and Chiffchaff song greeted us as we walked up the track. We climbed steadily, past a field with about 20 Swallows swooping low for insects. A Roe Deer was sighted through the trees and a Buzzard swooped overhead, both common sights these days.

We were walking along a forest track which proved a happy hunting ground for plants, particularly lower plants. The bare gravel, ditches and banks provided a range of habitats in small areas with some quite varied with occasional scarce species. Although we barely reached 350metres (just over 1000ft) many plants we saw were ones we knew from the Highlands.

The following were recorded

On bare stones, sand and gravel :

Birdfoot *Ornithopus perpusillus*, Birdsfoot Trefoil *Lotus corniculatus*, Sheeps Sorrel *Rumex acetosella* New Zealand Willowherb *Epilobium brunnescens*, Bitter Vetch *Lathyrus linifolius*, Heath Bedstraw *Galium saxatile*, Mouse-ear Hawkweed *Pilosella officinarum*, Thyme *Thymus polytrichus*, Bristly Haircap Moss *Polytrichum pilifera*.

and Lichens:

Cladonia portentosa, *C. gracilis*, *C. chlorophaea*, *C. coniocraea*, *Hypogymnia physoides*, *Baeomyces rufus*, and *Stereocaulon (dactylophyllum ?)*

and the Clubmosses

Alpine Clubmoss: *Diphasiastrum alpinum* and Stagshorn Clubmoss *Lycopodium clavatum*.

In the grassy verges we found the Lichens *Peltigera hymenina* and *P. membranacea* and the Mosses: *Hylocomium splendens*, *Pleurozium schreberi*, *Dicranum majus*, *Polytrichum commune*

In the running water of roadside gullies grew the striking yellow-green Moss *Pholiota fontinalis*.

Where trees overhung the woodland edge were four species of *Dryopteris* Fern: Scaly Male Fern *D. affinis*, Male Fern *D. filix-mas*, Narrow Buckler Fern *D. carthusiana*, Broad Buckler Fern *D. dilatata*,

During the day we also had a number of Fungi, maybe thriving in the wet weather:

Boletus piperatus, *Clitocybe* (3 species), *Marasmius androsaceus*, *Polyporus squamosus*, *Pleurotus* species, *Entoloma* species.

The plan had been to stop by the Shieldgreen Centre for lunch, an old cottage occasionally used by a Glasgow school for outdoor activities, but by then the rain had come on in earnest. We walked on, looking to see if a gap under the trees would do for lunch. Sitting under wet Spruce didn't appeal and a quick dash ahead by David found a nice wooden bridge made from local Douglas Fir *Pseudotsuga menziesii*, with beams on the side making a suitable seat. The rain had also stopped. Further pleasure came from watching a Dipper dashing upstream above us.

Out of the forest we crossed the Soonhope Burn to walk through grazed fields with grassland species in evidence: Rockrose *Helianthemum nummularium*, Ragged Robin *Silene flos-cuculi*, Common Vetch *Vicia sativa*, Bitter Vetch *Lathyrus linifolius*, Sanicle *Sonicula europaea*, Thyme *Thymus polytrichus*, Mouse-ear Hawkweed *Pilosella officinarum*, Long-stalked Yellow Sedge *Carex lepidocarpa*, Crested Hair-grass *Koeleria macrantha*.

The Soonhope Burn is unusual in having a group of wooden holiday cabins reminiscent of the allotment gardens you see from trains in Germany and other parts of Europe.

The final part of the walk took us into the mixed woodland in the Venlaw block of Glentress Forest, managed as a community woodland. A highlight was to hear and then see a young Great Spotted Woodpecker calling for food on a branch and then a parent come to feed it. From here we returned to Peebles having had a good day out and a bit of everything. Thanks to David for leading and to Neville for the lower plants list and Rebecca Yahr for helping with ID for two of the Lichens.

Wilma Harper

Soonhope - The B Party

A splinter group decided against the proposed route and opted for a more gentle walk along the Tweed, where some shelter might be expected. This group included the more decrepit, the more botanically inclined, and the youngest member of the party, Simon aged four, with his mother Rebecca.

We had to make our way through the main street of Peebles, which was in festive mood as the Beltane procession was expected shortly. At this stage the only sign apart from the crowds and the bunting was a huge bundle of very large balloons apparently making its way unaided along the street. Eventually we reached the river and set out along the south side botanising or throwing sticks into the water according to taste. The river was very high, very brown and very fast-flowing, following the heavy rain. We soon saw a Dipper and a Sandpiper and wondered how many birds' nests had been inundated. Presently a Heron came along and landed close by, in a shallow area which would normally have been dry land.

After an hour or two one member of the party mentioned that the rain had held off so far - and soon after the heavens opened. Fortunately we were quite near a footbridge over the river and could see a shelter on the other side and there we had lunch. The only member of the party who seemed quite unperturbed by the rain was young Simon.

It cleared up a bit after lunch and we decided to press on to Neidpath Castle and look at the rocks below. Simon however had spied a play park and headed straight for it, but the rest of us progressed so slowly that he and Rebecca caught up with us before we reached the castle. En route we noted a patch of Wood Clubrush *Scirpus sylvaticus*, a rarity in the Lothians, but commoner in the Borders.

On the rocks below the castle we found Fairy Foxglove *Erythronium alpinum*, Wild Thyme *Thymus polytrichus* and Hoary Rock-cress *Arabis hirsuta* with a couple of plants of Musk Thistle *Carduus nutans* below. There was also a good deal of Meadow Cranesbill *Geranium pratense* just coming into flower and Pignut *Conopodium majus* well out. Pignut is the food plant of the Chimney Sweeper Moth *Odezia atrata* and on a sunny day we should have seen plenty, but we only saw one, trying to shelter in the undergrowth.

The sun was coming out when we returned, and the streets of Peebles were quiet. We fear the procession may have been spoilt by the storm, but hope it had been more or less completed when the rain set in.

Jackie Muscott



That DIPPER again !

River Tyne, Haddington

Date 27th June

Leader Pauline King

The pounding rain which had been with us for two days continued as I drove east along the A1. Perhaps East Lothian would live up to tradition and improve? Remarkably when a small party of five optimists had gathered the rain slackened to a misty drizzle, which soon also stopped.

Pauline explained that we were to walk downstream on the left bank as far as Abbey Bridge following the recently constructed pathway, which would eventually lead to Hailes Castle. The banks sported lush tall grass and ruderal vegetation, with Alders, Willows and Hawthorns providing convenient song perches for a variety of birds including a score of dripping Wood Pigeons. The ruderal plants in flower included mauve and white Dame's Violet *Hesperis matronalis*, purple Russian Comfrey *Symphytum x uplandicum*, white Sweet Cicely *Myrrhis odorata* still fragrant but now mostly fruiting, yellow Leopardsbane *Doronicum pardalianches*, Red Campion *Silene dioica* and abundant Nettles and Thistles.

The rains of the last few days had raised the river levels by about 5 feet. Pauline feared for the nests of a Sand Martin colony about a kilometre east of the town. Although the water level had now dropped and most of the burrows were visible again, probably some of the eggs and chicks had been killed. However a dozen or so adults were still flying around feeding above the river. Perhaps they will lay again!

The bushes and tall herbs proved to be a busy place for small passerines, most still in song. We identified a minimum of three territories of Reed Bunting, one Garden Warbler, 4 Whitethroats, 4 Dunnocks and more than one Willow Warbler. Near to the weir where a Grey Heron fished, a family party of small downy Mallard ducklings looking vulnerable, perhaps represented a replacement brood. There were also Pied and Grey Wagtails with recently fledged young. The wheat field to the north had a few Pheasants and we eventually identified a dun coloured hummock, as a Brown Hare.

At Abbey Bridge, a herb-rich meadow gave us a showy collection of flowers typical of base rich soils. Most prominent were large stands of Kidney Vetch *Anthyllis vulneraria*, unusual away from the coast, Common Vetch *Vicia sativa*, Lesser Trefoil *Trifolium dubium*, Meadow Vetchling *Lathyrus pratensis* and Ox-eye Daisy *Leucanthemum vulgare*. As we turned to retrace our steps, Pauline contemplated the future completion of the track and the possibility of a full day excursion to Hailes Castle and beyond.

Neville Crowther

Dowlaw and Brander Heugh

Date 30th June

Leaders Michael Braithwaite & Barry Prater

A party of fifteen members and friends led by Michael Braithwaite and Barry Prater explored the fields near Dowlaw Dean, the sea braes of Brander Heugh and Lumsdaine Shore below. A dry sunny day was a great blessing after recent rains.

Spring Vetch *Vicia lathyroides* was seen in flower and fruit at a small knowe near Dowlaw Dean with Squirreltail Fescue *Vulpia bromoides*. A few specimens of White Clover *Trifolium repens* were noted to have proliferous heads. Nearby was a field of Broad Beans *Vicia faba*. The crop was very sparse allowing a diverse weed flora, though even the weeds were hardly flourishing except for the abundance of Corn Spurrey *Spergula arvensis*. Modest quantities of Scarlet Pimpernel *Anagallis arvensis*, Cut-leaved Dead-nettle *Lamium hybridum* and Field Penny-cress *Thlaspi arvense* were the highlights. The only fumitory seen on the outward leg was Common Ramping-fumitory *Funaria muralis* subsp. *boreoi*, but one plant of Dense-flowered Fumitory *Funaria densiflora* was seen on the return leg, new to NT87.

Two battery-operated light traps had been run over the previous night near the dean and at a convenient point on the way to the shore a selection of the Moths caught was shown to the party. Amongst them were several Map-winged Swift *Hepialus fusconebulosa*, one of which was a male of the form *gallicus*, Small Angle Shades *Euplexia lucipara* and five other species which were all new for NT86 or NT87. This strip of the Berwickshire coast has been little investigated for Moths and further day-flying species were noted on the excursion, including Latticed Heath *Chiasmia clathrata* and Yellow Shell *Camptogramma bilineata*. An adult Small Elephant Hawkmoth *Deilephila porcellus*, possibly freshly-emerged, was located on the shore: this is recorded infrequently in Berwickshire and is new for NT87.

On the sea braes a pair of Grey Partridge were disturbed where Kidney Vetch *Anthyllis vulneraria*, Meadow Oat-grass *Helictotrichon pratense* and Crested Hair-grass *Koeleria macrantha* were locally abundant. A good colony of Carline Thistle *Carlina vulgaris* with a few Common Spotted Orchid *Dactylorhiza fuchsii* were seen by all the party before seven intrepid souls picked their way down the zig-zag smugglers' path to the shore, passing a good showing of Common Milkwort *Polygala vulgaris* and disturbing several Common Lizards while some patches of Hemp Agrimony *Eupatorium cannabinum* were found near the beach. The sunshine encouraged some of the Butterflies associated with the sea braes to be on the wing, particularly a Dark Green Fritillary, Common Blue and two Northern Brown Argus. Other notable insects were a Lacewing *Chrysoperla carnea*, new for NT87 and the Ruby-tailed Wasp *Chrysis ignita*, for which there is only a handful of Scottish records, and none in the UK within 100km.

The party took lunch by the beach watched by three Eider Duck. While munching a sandwich the leader noted one flower spike of Sand Sedge *Carex arenaria* at his feet, a first record for the site, with a colony of Sand Couch *Elytrigia juucea* that was only flowering sparsely. Two good plants of Yellow Horned-poppy *Glaucium flavum* were seen in bud nearby, at the very back of the beach, with about 60 young rosettes nearby. Amongst the *Atriplex spp.* on the beach were a few specimens of Frosted Orache *Atriplex laciniata*. A little to the north was a colony of Scots Lovage *Ligusticum scoticum*. Like the *Glaucium*, the mature plants were at the very back of the beach with a mass of young plants, some in flower, on the sand and gravel nearby. Japanese Rose *Rosa rugosa* had been found on this beach in 2011 and had been thought to have been eradicated by the St Abbs Head ranger and Robert Brandt. Robert, who was with the party, was distressed when it was refound in two places.

The party made the exhausting climb back to the clifftop and then retraced their steps somewhat wearily back to Dowlaw. One or two folk left early and one or two got lost, but eventually all departed safely.

M.E. Braithwaite & B. Prater

Cramond Island
Date July 4th
Leader Neville Crowther

Our visit typical of this summer was accompanied by torrential rains, thunder and lightening. Four enthusiastic souls joined the less enthusiastic leader in crossing the causeway two hours before low tide.

Cramond Island stands proud from the surrounding Forth estuary, because geologically it is a sill of a hard volcanic rock, Diorite, which has resisted ice and tidal erosion more successfully than other rocks. This intrusion occurred about 285 million years ago. The old name for this rock is whinstone, because the shallow overlying soils support Gorse (or Whin) bushes. Other prominent exposures of the same age and composition include Salisbury Crags, Corstorphine and Dalmahoy Hills. The Great Whin Sill runs east west across northern England carrying Hadrians Wall and ending in the Farne islands.

Until 1960 an occupied farm existed on the island and sheep were grazed. Since their removal, coarse vegetation and trees have spread over the grassland in the northern part, reducing the botanical interest. The one notable plant of that area was Hemlock *Conium maculatum* growing prominently amongst the coarse grasses.

During both world wars, because of the islands proximity to Rosyth, gun emplacements and barrack blocks were built. The causeway to the island was given a row of concrete pillars over 1 kilometre long which was designed to block the infiltration of midget submarines and E boats.

Wherever the soils are shallow, on the ridges and knolls, the coastal grassland has an attractive herb flora with base-rich affinities. Interesting grasses on the rockiest of points include Early Hair Grass *Aira praecox*, Squirrel Tail *Vulpia bromoides* and Sheep's Fescue *Festuca ovina*. Elsewhere Red Fescue *Festuca rubra*, Sweet Vernal Grass *Anthoxanthum odoratum* were dominant. Flowering herbs typical of maritime grassland were Scots Lovage *Ligusticum scoticum*, Birdsfoot Trefoil *Lotus corniculatus*, Thyme *Thymus polytrichus*, Biting Stonecrop *Sedum acre*, Rough Hawkbit *Leontodon hispidus*, Lady's Bedstraw *Galium verum* and Sea Plantain *Plantago maritima*.

The zonation from low water to the terrestrial area showed a well-documented succession : from a wide swathe of barnacles in the mid to lower shore, through the Knotted Wrack *Ascophyllum nodosum* and some Bladder Wrack *Fucus vesiculosus* in the middle shore to the highest algal layers of Spiral Wrack *Fucus spiralis*, Channel Wrack *Pelvetia canaliculata* and where it is sheltered, Lava Bread *Porphyra umbilicalis*, which is still eaten as a traditional dish in the Celtic fringes of Britain and Ireland. Above, colourfully distinct lichen layers bridge the transition through the splash zone. The black of *Verrucaria sp.* is followed by yellow and orange of *Xanthoria* and *Caloplaca spp.* with grey, pale green and brown species on the uppermost rocks.

As we returned to the causeway we were entertained by several species of sea bird including Herons and Common Terns fishing in the tidal pools. Although the rain had by then ceased, the next expected intrusion was the thickening haar, which only hastened our return to the mainland.

Neville Crowther

Corstorphine Hill (Bumblebees)
Date 11th July
Leader David Adamson

Nine attended this rearranged meeting at the top of Kaimes Road on a cool, grey, but dry afternoon. The aim of the outing was to look at the Bumblebees on the Hill. We found these, in the main, either in the Walled Garden, with its mixture of native and garden plants, and on raspberry flowers above a nearby area of mown grass.

In the UK are some 24 species of Bumblebees. All are members of the genus *Bombus*, and all live in colonies that should build up in numbers over the summer. Queen Bumblebees emerge from hibernation in the spring. They find a suitable nest site, lay fertilised eggs, and incubate these until they hatch. The queen feeds the newly-emerged grubs on pollen, while feeding herself from a pot of nectar. These grubs develop into infertile females, called workers, who then collect more pollen to feed the grubs from the next batch of eggs laid by

the queen. This cycle continues until the colony consists of one queen and perhaps 150 workers. At this point the queen lays unfertilised eggs, and the grubs hatched from these eggs become male bumblebees, known as drones. They leave the nest and do not return, having no role to play except mating with the new generation of queens that are normally the last Bumblebees to be reared in the colony. The old queen, the workers and the drones die in the late summer and the new queens hibernate until renewing the cycle in the following spring.

Six of the twenty-four species are Cuckoo Bumblebees. They produce no workers, instead taking over a nest of Social Bumblebees, laying eggs, and using the existing workers to rear their own offspring, all of which become drones and queens.

At the time of our visit to Corstorphine Hill the life cycle of at least one species, the Early Bumblebee *Bombus pratorum* was nearing its end, and we saw only one worker of this species. The Red-tailed Bumblebee *Bombus lapidarius* appears to be relatively scarce this year, and we saw only two or three males and one worker. The Garden Bumblebee *Bombus hortorum* was scarcely in evidence at all, despite being a very common and widespread species. We found one foraging on Foxglove and perhaps another was seen in the Walled Garden. The long spell of continuous cool, wet, and cloudy weather appeared to have harmed the Cuckoo Bumblebee species more than the social Bumblebees; we found no Cuckoo Bumblebees at a time of year when they are normally plentiful. However there were large numbers of both workers and drones of the Buff-tailed Bumblebee *Bombus terrestris* foraging on Raspberry flowers, and on Viper's Bugloss *Echium vulgare*, a plant which has thrived since being introduced in the Walled Garden. Drones of the White-tailed Bumblebee *Bombus lucorum* were also feeding on these plants. These drones are easily recognised by their bands of bright lemon-yellow hairs, separated by a couple of black bands and a white tail. In contrast, the workers of this species are black and yellow with a white tail and are very difficult to distinguish from the workers of *Bombus terrestris*. Finally we saw a few Common Carder Bees *Bombus pascuorum*, which are the only common ginger Bumblebees.

There are opportunities to improve the habitat on the Hill for bees. The roadside verge of Clerkston Road and the large areas of closely mown grass on the west side of the hill are of little or no value to Bumblebees. Red Clover, in combination with a mixture of other flowering plants favoured by Bees would be a great improvement on these green deserts. The fields and verge could be mown towards the end of summer so that winter sledging would not be impeded by dead plant stems, and paths could be left for dog walkers and other users of the hill. This would enrich the Hill's biodiversity, and should also enrich the Council by reducing the amount of rather unnecessary and cosmetic grass cutting. Finally, in a few weeks the Society visited Silverknowes to find out about a project with the aim of making parkland more suitable habitats for Bumblebees.

David Adamson

Cockmuir - Toxside
Date 14th July
Leader Neville Crowther

The weather forecast was reasonable for the first time in many weeks. It attracted a round dozen members, who started the walk north of Cockmuir Bridge. Our initial objective was to look at the roadside verges which were of high botanical interest with both acid and base-rich sections and marshy grassland, depending upon various combinations of underlying rock, drainage and topography.

Species included commonly Quaking Grass *Briza media*, Lady's Bedstraw *Galium verum*, Rough Hawkbit *Lionodon hispidus*, Yellow Oat *Trisetum flavescens*, and more rarely Adder's Tongue Fern *Ophioglossum vulgatum*, Pill and Flea Sedges *Carex pilulifera* and *C. pulicaris* and Common Twayblade *Neottia ovata* were found. Damp areas displayed the tall spikes of Melancholy Thistle *Cirsium heterophyllum* characterised by large silver-backed leaves. One low point had an enormous ("wow" from David) stand of Brown Sedge *Carex disticha*.

We did find a few Lepidoptera, although with the experience of our last visit we had expected thousands. Just into double figures were newly emerged Ringlets, Yellowshells and beautifully chequered Latticed Heaths. By the end of the afternoon we had also managed to see the odd Common Blue, a single Small Tortoiseshell and the most exquisite Garden Tiger with ochreous and cream forewings and flaming red hind wings. A species new to most, was an unlikely Moth called the Yarrow Plume *Gnathocina pallidactyla* known as the 'Propeller Moth' by some older members.

Before leaving the tarmac road, a minute or two was spent looking over the fence into Coekmuir Marsh, where Northern Marsh Orchid *Dactylochila purpurella* and its hybrid with Common Spotted *D. purpurella x fuchsii* (*D. x venusta*) were growing well. Marsh Thistles *Cirsium palustre* and Marsh Lousewort *Pedicularis palustris* all added more purple stippling to the swathe of green.

We then made our way into the afforested area between Coekmuir and Toxside. The high points in the rolling landscape are drumlins and eskers of late glacial age. About 60% of the area had been planted 12 years ago with a mixture of conifers and native hardwoods. Many of the hollows in the topography retain small raised bogs and marshy grassland. Some of the tops and slopes have dry grassland, both acid and basic. This mosaic of vegetation types produces constantly changing interest on the walk.

The Fullerton Water drains much of the area and was much swollen by recent rains. Bright green wraithes of blossoming Water Crowfoot *Ranunculus aquatilis* agg. streamed out, as though awaiting Ophelia. The banks were coloured by Marsh Ragworts *Senecio aquaticus* with large golden yellow flower heads.

We chose to take lunch on the edges of the track where herb-rich dry grassland sported Heath Grass *Danthonia decumbens*, Spring Sedge *Carex caryophyllea*, Mouse-ear Hawkweed *Pilosella officinarum*, Heath Speedwell *Veronica officinalis* and Lady's Bedstraw *Galium verum*. The vegetation on the top of a large esker was similar. Held in a curve below the esker, a raised peat bog not unexpectedly displayed Cranberries *Vaccinium oxycoccus* and Round-leaved Sundews *Drosera rotundifolia*, with Purple Moor Grass *Molinia caerulea*, *Sphagnum* sp. and Bog Asphodel *Narthecium ossifragum* dominating.

The 'van' pressed on and surprisingly, given our recent experience, three Hawker Dragonflies were seen by Sarah. Thus encouraged several of us plodded across the open Cotton-grass swamp to look for Large Heath Butterflies (as we had 3 years ago). Sadly the result was zilch!!

On our return some little time was spent, as we did at Soonhope a month ago, looking at the communities which develop on gravels left after road mending. The mosaic of 'miniaturised' mosses, fungi, lichens and vascular plants contained a few surprises such as Orange Peel Fungus *Aleuria aurantia*, *Cladonia cariosa*, Changing Forget-me-not *Myosotis discolor*, Sheep's Sorrel *Rumex acetosella*, Parsley Piert *Aphanes arvensis* agg. and *Polytrichum piliferum* and *P. juniperum*.

As if to compensate for the dearth of birdlife, a flock of 27 Mistle Thrushes flew across the road as we reached the cars. Another surprise was a sheep stuck in a flooded midden by the old lime kiln, with just its head and back protruding. We drove along to Mt. Lothian Farm to tell Mr Brown and were almost crushed by a tractor with a bucket speeding to the rescue. We had obviously been 'pipped' by someone else.

Neville Crowther

Lammermuir Wander

Date 21st July

Leader Douglas McKean

The party gathered at Kidlaw Farm where we noted a nice patch of Good King Henry *Chenopodium bonus-henricus* (usually found near old houses) and a small flock of Guinea Fowl. Douglas even managed to get into the piggyery when he went on the rescue!

However we soon moved on to Over Newton where there's a track into the hills, and began our wander up to Lammerloch Reservoir. The sun was shining (an unusual event in 2012), Swallows were overhead and we saw a good number of Butterflies - mainly Ringlets to start with.

We took a short diversion to look at the active sand mine and its associated ponds, where we noted Sand Martins and Oystercatchers, but we were soon back on the track above Dumbaden Burn and its marshes. Here we encountered more butterflies - Red Admirals, Small Tortoiseshells and Meadow Browns - while below Common Blue Damselflies *Enallagma cyathigerum* were flying by the river.

Yarrow *Achillea millefolium*, Heath Groundsel *Senecio sylvaticus* and Sheep's Sorrel *Rumex acetosella* were growing in the drier areas by the path, along with Catsear *Hypochaeris radicata*, Tormentil *Potentilla erecta* and a little Red Clover *Trifolium pratense*. While the marsh was colourful with patches of Ragged Robin *Silene flos-cuculi*, Cuckoo Flower *Cardamine pratensis*, Water Forget-me-not *Myosotis scorpioides* and

Lesser Spearwort *Ranunculus flammula*. Water Horsetail *Equisetum fluviatile* and the tall, handsome Reed Canary Grass *Phalaris arundinacea* were growing in the shallows.

Presently we arrived at a small loch, the remains of a former reservoir and, settled down for lunch on the warm stones of the old dam. One of the party caught sight of an Adder, perhaps the most interesting find of the day, and a search party looked for further traces after lunch, but the snake was keeping well out of the way. There were more Butterflies - Common Blues whose food plant Birdsfoot Trefoil *Lotus corniculatus* was growing nearby, and the occasional Small Heath.

Bottle Sedge *Carex rostrata* was growing by the loch along with another plant, which, on investigation, turned out to be Marestail *Hippuris vulgaris* (which looks a bit like a horsetail, but is a proper flowering plant). A stream was flowing into the corner of the loch near the Marestail, and beyond it was a heathy area with Ling *Calluna vulgaris*, Bell Heather *Erica cinerea* and Heath Speedwell *Veronica officinalis*, plus Fairy Flax *Linum catharticum* and Sand Spurrey *Spergularia rubra*.

But soon this pleasant interlude was over and we embarked on the final climb to Lammerloch, passing Harebell *Campanula rotundifolia*, Juniper *Juniperus communis*, a live Toad and a dead Hedgehog (a young one, cause of death unknown) en route. Lammerloch has steep sides which make it difficult to investigate, but we were able to identify Shoreweed *Littorella ulmiflora*, Common Spike Rush *Eleocharis palustris*, Alternate Water Milfoil *Myriophyllum alterniflorum* and a Water Crowfoot *Ranunculus aquatilis* agg. There were more Sand Martins and more Common Blue Damsels, here mating and in tandem.

Returning, we noted a number of plants missed on the way out, and added white Butterflies (probably Green-veined), Brown Trout and a flock of Linnets to the list. We were much intrigued to see a family of Swans munching away at the Water Horsetail, which must be pretty tough as it's full of silica. And it was on the way back that we noted yellow Waxcaps *Hygrocybe chlorophana* and Fairy Ring mushrooms *Marasmius oreades* in the grass.

It was a lovely day and thanks very much to Douglas for introducing us to such an attractive area.

Jackie Muscott

Nine Mile Burn
Date 25th July
Leader Lynn Youngs

12 members met up on a lovely evening with beautiful views of the surrounding hills to walk along the right of way from Nine Mile Burn to Braid Law and return. In the car park Swallows were flying around and during the walk we spotted Meadow Pipit, 11 Mallards flying overhead, Lesser Black-backed Gulls, Lesser Redpoll flying and a Peregrine was heard but not seen close to Braid Law.

A number of plants were spotted including Bog Stichwort *Stellaria alsine*, Lesser Stichwort *Stellaria graminea*, Ragged Robin *Silene flos-cuculi*, Heath Bedstraw *Galium saxatile*, Marsh Bedstraw *Galium palustre*, Harebell *Campanula rotundifolia* and a lovely display of Brooklime *Veronica beccabunga*. Grasses and Sedges abounded and we spotted Crested Dog's-tail *Cynosurus cristatus*, Deergrass *Trichophorum cespitosum* agg., Heath Rush *Juncus squarrosum*, Purple Moor-grass *Molinia caerulea*, Common Sedge *Carex nigra*, Star Sedge *Carex echinata*, Oval Sedge *Carex leporina* and Sheep's Fescue *Festuca ovina*. Ferns seen included Narrow Buckler Fern *Dryopteris carthusiana* and Broad Buckler Fern *D. dilatata*.

A number of Moths were recorded - they were all disturbed from the bracken and hill pasture as we walked along and numbers increased as the sun was setting on the return route. We found one Purple Bar, eight Silver Ground Carpets and four Green Carpets plus scores of Micro Moths *Agriphila tristella* which almost disappear as they land and close their wings. One Ringlet was also spotted.

Another very enjoyable and interesting evening outing.

Lynn Youngs

Loch Leven

Date 28th July

Leader Jackie Muscott

A large party of Nats gathered at the RSPB's Loch Leven Centre on a day of sunshine and showers. There are lots of options at Loch Leven, so the party soon fragmented, with the bird-lovers heading initially for the hides and most others setting out on the path round the loch. It was sunny to start with and we were soon counting the Ringlet Butterflies which seem to have done well this year.

Two tall marsh plants Meadowsweet *Filipendula ulmaria* and Valerian *Valeriana officinalis*, both scented, were in full flower by the loch, as was the tall, waterside Reed Canary Grass *Phalaris arundinacea*, while a trip to the water's edge revealed the first Sedge of the day Hairy Sedge *Carex hirta*. We also disturbed a couple of 6-spot Burnet Moths *Zygaena filipendulae*, and a lone Peacock caterpillar crawling through the grass, well away from its food plant Nettle *Urtica dioica*, presumably looking for somewhere to pupate.

We probed a number of Vole runs in long grass beside the path, and passed through swarms of Caddis Flies (species unidentified) which must have just emerged, while those who didn't have their eyes completely on the ground were delighted to see an Osprey fly across the loch.

A little further on, we passed a bank of bare earth being colonised by weeds and a good deal of Toad Rush *Juncus bufonius*. However our examination was cut short by the onset of the heaviest and most prolonged of the day's showers. Of course it was lunch time. Some people managed to eat under trees before the drips came through, others just sheltered as best they could and ate on the hoof later.

By now we had reached a really lovely marsh where we identified 9 more Sedges, including the Long-stalked Yellow Sedge *Carex lepidocarpa* and Tawny Sedge *C. hostiana* which quite often hybridise - but we found no illegitimate offspring on this occasion. We also found a patch of the much smaller Dioecious Sedge *C. dioica*, one of just 2 British Sedges which are single sex.

Among the more attractive flowers were Ragged Robin *Silene flos-cuculi*, Marsh Lousewort *Pedicularis palustris*, Marsh Hawksbeard *Crepis paludosa*, Square-stalked St John's Wort *Hypericum tetrapetalum* and Quaking Grass *Briza media*. The beautiful Grass-of-Parnassus *Parnassia palustris* was just coming into flower, while Bogbean *Menyanthes trifoliata* was fruiting well. It was interesting to see Lesser Clubmoss *Selaginella selaginoides* which is a lime-lover (calcifuge) growing next to Round-leaved Sundew *Drosera rotundifolia* which is usually found in acid conditions (calcifuge).

The tips of some of the taller Sedges had been woven into nests by the Orb Spider *Larinioides cornuta*. A Frog was seen in the marsh, as were a couple of Blaek Darter Dragonflies *Sympetrum danae*. Other insects recorded included the common red Soldier Beetle *Rhagonycha fulva*, and the Noonday Fly *Mesembrina meridiana* which has conspicuous orange 'shoulders' (the base of the wings is orange). The Tapered Drone Fly *Eristalis tenax* gets its name because it resembles a Honey Bee drone.

A number of Bumblebees were noted including a Cuckoo Bee *Bombus sylvestris*. Cuckoo Bees take over the nests and workers of other Bees, and *B. sylvestris* usually parasitises *Bombus pratorum* which was also present. Specimens of another interesting Fly *Cheilosia illustrata* were seen buzzing around Hogweed *Heracleum sphondylium*; apparently the larvae feed on the roots.

Just round the corner from the marsh was a small clump of Common Ink Caps *Coprinus atramentarius* one of the few Fungi recorded apart from some rusts. This Mushroom is edible provided alcohol is avoided; if not it causes unpleasant symptoms, and extracts have been used in attempts to cure alcoholism. Since it's one of our deliquescent mushrooms it has also been used to produce a black ink.

We returned to the Centre in time for a cup of tea, and there we met up with the bird lovers. They had seen families of Goldfinches and Siskins on the feeders, Wigeon, Tufted Ducks and Great Crested Grebes on the water, and flocks of Curlew and Lapwing feeding nearby. Walking round the loch they encountered families of Sedge Warblers and Reed Warblers and at luncheon they had the company of a pair of Wrens feeding their young. The inevitable Buzzard was overhead.

All in all there was something for everyone, and despite the weather it was a good day.

Jackie Muscott

Community Bee Project, Silverknowes

Date 1st August
Leader Helen Macfie

Eight members were present at this excursion, led by Helen Macfie, Project Manager of the Community Bee Project (CBP). CBP was set up in January 2011 to bring Green Space groups together to work collectively towards developing Bumblebee-friendly habitats, initially in Edinburgh. The aim is to transfer these strategies to other urban environments throughout Scotland.

ENHS donated £200 to the Project last year, and Helen was demonstrating how the money was being spent. The City of Edinburgh Council had offered Silverknowes Park, Braidburn Valley Park and Hermitage of Braid as test sites for sowing wild flower seeds in previously grassed parkland areas. Ground preparation took six weeks, using a spray to kill off the grass and then rotovating the dead grass into the soil. Immediately after this, 1kg of Bird-, Butterfly-, Moth- and Bumblebee-friendly wild flower seed mix was sown in a 400 square metre area, over a one metre perimeter edge of the park. There was no intervention for thirteen months.

The purpose of the evening was to see how well the planting had gone, with some plants showing well, some not at all. From the seed mix, the strongest were both Red and White Campion *Silene dioica* and *Silene latifolia*, Teasel *Dipsacus fullonum* and Viper's Bugloss *Echium vulgare*. Not showing quite so well were Field Scabious *Knautia arvensis*, Yarrow *Achillea millefolium* and Hedge Woundwort *Stachys sylvatica*. Those with no-show at all were Cow Parsley *Anthriscus sylvestris*, Kidney Vetch *Anthyllis vulneraria*, Clustered Bellflower *Campanula glomerata*, Greater Knapweed *Centaurea scabiosa*, St John's Wort *Hypericum perforatum*, Meadow Vetchling *Lathyrus pratensis*, Birdsfoot Trefoil *Lotus corniculatus* and Greater Birdsfoot Trefoil *L. pedunculatus*, Wild Marjoram *Origanum vulgaris*, Goatsbeard *Tragopogon pratensis* and Mullein *Verbascum sp.* Some reasons for this no-show were inability to compete with the more vigorous plants, wrong soil type, or too lush.

Plants in evidence but not in the mix were Spear Thistle *Cirsium vulgare* and Creeping Thistle *Cirsium arvense*, Buttercups *Ranunculus spp.*, Rosebay Willowherb *Chamerion angustifolium* (Fireweed) and another unidentified Willowherb, Hedge Mustard *Sisymbrium officinale*, Ragwort *Senecio jacobaea*, Hemlock (in seed) *Conium maculatum* and Plantain *Plantago lanceolata*. The Plantain was huge having grown to about 3 ft tall. Of the sown seed the two Campions had set seed. Teasel was not yet in flower.

Since the Spring, approximately thirty Bumblebees per month had been counted, with four species. We did not see many Bumblebees on the night. A question was raised regarding how the persistent wet weather may have affected them. David explained that the males have mostly vanished as a result of too many cold soakings but the workers have mostly survived as they go for cover then come back out. Some suggestions made regarding plantings were to intersperse shrubs; to use a *Hypericum* mixture; to stagger flowering throughout the year so that the Bees had nectar/pollen from as early in the year to as late as possible; to grade planting height from back to front of the area to allow the least strong plants room; and possibly plant in patches. To do this, seeds would need to be separated out. Cutting back could also be staggered in strips. Soil type is important, e.g. Kidney Vetch needs poor soil. The City could be encouraged to plant more wild flowers in place of the high and variegated colour plants which are totally sterile. Such a change, and others, would need to be made slowly before public acceptance could happen, and a suggestion was made to place interpretation boards at the wild flower sites could help the public understand any changes. The City is working in collaboration with Edinburgh University in testing urban landscapes to see what will grow where.

The evening weather was warm and humid, until rained off after an hour by an almost tropical rainstorm. With thanks to Helen for giving up her time to come along to explain the Community Bee Project.

Joanie McNaughton

Williamhope

Date 4th August

Leader Neville Crowther

Neville Crowther led the group of 17 who assembled at Glenkinnon car park near the old Peel Hospital on an unusually warm and bright morning. Williamhope is a venue of great natural history interest and a large part of it is an SSSI, mainly due to the rich grassland plant communities that support diverse invertebrate life. Grazing by sheep and cattle maintains these plant communities by preventing the re-establishment of Hawthorn scrub, except in some isolated patches.

The first part of the walk was through mature deciduous woodland. Some of the majestic Oaks *Quercus sp.* had several main trunks, suggestive of ancient coppicing. On one was a bright red Beefsteak Fungus *Fistulina hepatica*. Jean Murray pointed out a mound near Ashiesteil upon which Sir Walter Scott is supposed to have rested while writing some of his works.

Upon emerging from the woodland we ascended the glen on the metalled farm road, the woods always on our left and the increasingly rich grasslands on the slopes to our right. Rockrose *Helianthemum nummularium* was one of a number of yellow flowers than combined with Thyme *Thymus polytrichus* and Burnet Saxifrage *Pimpinella saxifraga* to colour these hillsides. A feature of all the Williamhope plant communities was mixture of calcicole and calcifuge plants, often growing side by side.

On the mounds of the Yellow Hill Ants *Lasius flavus* were plant species that were microcosms of the general plant communities of Williamhope. On some we found Thyme plants, on others Rockrose, and yet others were host to Bell Heather *Erica cinerea*.

The following passage is taken from Morley, D. W. 'The Ant World' (Penguin Books, 1953):

'The yellow hill ants build the common ant-hills of the European meadowland and mountain pastures. Rarely more than a foot in height, and usually lower, they are shaped more like sloping slag-heaps than the conical hills of other ants. The inhabited part of the hillock is the summit with the steepest slope. This summit nearly always faces south east, to catch the rays of the morning sun, the longer slope of the hill tacking off towards the north-west. This larger slope is the result of progressive building and abandonment of new parts as the colony grows. The peculiar shape of the nests of this ant and the constancy of its direction when left undisturbed has caused it to be used as a convenient compass guide by mountaineers who are caught in fog or have lost their way.' He adds that 'the soil in the nest is very acid – much more so than the surrounding land - because of the presence of the ants.'

The strong sunshine had brought out the Butterflies, Bumblebees, Bee mimics and Hoverflies. We saw strong-flying Dark Green Fritillaries, Common Blues, Ringlets and Meadow Browns, as well as the occasional Small Heath, some White Butterflies and many Antler Moths. A surprise was one late Northern Brown Argus *Aricia artaxerxes*, although we had searched for and found about ten egg-shells on the Rockrose leaves. Queen Bumblebees of two Cuckoo species were seen, *Bombus sylvestris* and *B. campestris*, both looking rather ragged and suggesting that they may be 2011 queens at the end of their life cycles, having failed to establish colonies. The commonest Bumblebees were *Bombus hortorum* and *B. pascuorum*, and both were mimicked in colour pattern and size by Flies, the former probably by *Volucella bombylans* and the latter, I think, by *Criorhinia floccosa*. Finally we found a spectacular Long-horned Beetle, *Leptura quadriasciata*. My notebooks record finding it in Williamhope in 1993 and 1994, the former on a Society excursion. Those who returned by the metalled road were fortunate in arriving at the car park just as the downpour began. The two bedraggled groups in Glenkinnon forest were less fortunate, but were rewarded for their travails by finding the rare *Amanita porphyria*, and a good population of Betony *Stachys officinalis*: unlike the Betony plants in Williamhope, these were in flower.

Many thanks to Neville for leading an excellent outing (and who apologises for getting lost in the forest for half an hour).

David Adamson

Skateraw and Torness

Date 11th August
Leader Tom Delaney

A warm sunny day was in prospect as 16 folk assembled at Skateraw almost filling the car park. Tom's telescope was immediately in use. Amongst the more common gulls and waders a lone Whimbrel occupied our attention. Before lunch we wandered around the bay where a number of shingle and sand dune plants Lyme Grass *Leymus arenarius*, Sea Rocket *Cakile maritima* and Sea Sandwort *Houckenya peploides* were notable. Around Chapel Point the Marram *Ammophila arenaria* was dense and tall punctuated by bushes of Burnet Rose *Rosa spinosissima*, now with dark purple hips present. Both Common and Purple Toadflax *Littoria vulgaris* and *L. purpurea* were here although I suspect the latter had escaped from wreaths laid at a war memorial nearby. Mary Clarkson chanced upon a rather flattened Strawberry Clover *Trifolium fragiferum*, known from only a handful of sites in SE Scotland. David recorded 5 common species of Bumblebees here and others saw many 6-Spot Burnets *Zygaena filipendulae* and in larger numbers the Pyralid Moth *Udea lutealis* and even a Yellow Shell *Caumontogramma bilineata*.

A determined seawatch was maintained by several observers. The scopes revealed numerous strings of Gannets, most moving south to feed, a few dozen 'Shaggers' (Shags or Cormorants), a few distant Sandwich Terns and small flocks of Common Scoter. On the beach and at Chapel Point we saw many hawking Sand Martins. On our way back to the cars for lunch we noticed a number of straggling bushes in the dunes. They were named Duke of Argyll's Tea Plant *Lycium barbarum*, a native of China and now established at coastal sites in the east of Scotland. This neophyte was introduced at the end of the seventeenth century.

After lunch and close to the shore-line limekilns, we found as neighbours Scots Lovage *Ligusticum scoticum* at its southern limit and Yellow Horned-poppy *Glaucium flavum* at its northern limit. A few yards away there developed a scrum of photographers around one of several Ant hills of the Yellow Meadow Ant *Lasius flavus*. Here unlike a week ago at Williamhope, the Ants were clearly on view: the honey coloured workers and the less numerous black winged males contrasting strongly.

We then followed the coastal footpath on the seaward side of the power station. To our left, Cormorants dried out atop concrete pillars and to the right Peregrines, which are known to have nested on the power station for several years, performed their high speed stoops. The sea watches continued without any sightings of note except for distant Kittiwakes and one buoyant Little Gull, now without its hood.

At the Thorntonloch end of the sea wall we watched a scattering of fishermen daringly perched along the edge of the 'hot' water outflow, intent on a catch of fish attracted possibly by a rich food source. On the earthen banks behind the wall were numbers of unusual opportunist plants, which attracted us. Teasel *Dipsacus fullonum*, Petty Spurge *Euphorbia peplus*, Chicory *Cichorium intybus* and Oxford Ragwort *Senecio squalidus* were amongst them.

A decision was made to shorten the trek back, by cutting across the landward side of the station. In doing so, we discovered Hedge Bedstraw *Galium album* and Field Bindweed *Convolvulus arvensis*, never common. Later, Lucerne or Alfalfa *Medicago sativa* was found on the edge of a wheat field, no doubt an agricultural introduction (it's an old fodder crop). A few Pied and a single White Wagtail were encountered here. Back at Skateraw a female Sparrowhawk was swooping acrobatically between houses and trees panicking dozens of feral Pigeons. As a finale it perched on the picnic table, beside Katherine's car when only she was left to enjoy it.

Neville Crowther

Donald Rose and Carriston Reservoirs
Date 18th August
Leader Jackie Muscott

These former reservoirs near Glenrothes are not too easy to find, but a large contingent of Nats managed to get there on 18 August. The reservoirs were the work of a Victorian philanthropist Donald Rose, who expanded Carriston Loch and built the upper reservoir to provide clean water for nearby towns. They have now been decommissioned and we parked near the remains of the filtration plant. The upper reservoir is now a fishing loch while the lower one is a nature reserve and a Site of Special Scientific Interest.

We started out along the wall of the bottom reservoir where we had good views of various water birds. Apart from the commoner ones – Swans, Mallards, Tufties and Coots - there were Great Crested Grebes and Little Grebes, both with families. Sand Martins, House Martins and Swallows were all at various times taking insects off the water.

Unfortunately our bird-watching was interrupted by a heavy shower and the party fled in different directions; some went back to the car park while others headed in the opposite direction for a grove of Horse Chestnuts *Aesculus hippocastanum*. Here we were able to get down to the loch and investigate some of the water plants. There was plenty of Reed Canary Grass *Phalaris arundinacea* and Common Spike Rush *Eleocharis palustris*, quite a bit of Branched Bur-reed *Sparganium erectum* and a couple of plants of Water Plantain *Alisma plantago-aquatica*.

After the rain we ate lunch in the vicinity of the car park, and the weather being fine, set off for a second time. There were large patches of Meadow Scabious *Knautia arvensis* round the lower loch which together with Common Knapweed *Centaurea nigra* and other plants were attracting a variety of insects. A Small Tortoiseshell Butterfly posed decoratively on a Scabious flower, and various Hoverflies were noted, mainly Wasp mimics like *Syrphus ribesii* with horizontal black and yellow stripes on the abdomen. *Episyrphus balteatus* the Marmalade Fly is distinctive with its darker colour and double stripes, while *Helophilus pendulus* has vertical stripes on its thorax contrasting with those on its abdomen.

Round the corner from the car park we passed a Birch tree on which a Sawfly *Croesus septentrionalis* had laid its eggs. The larvae which are greenish feed on the edge of the leaves and when threatened lift their tails, so the leaf looks as if it's deeply serrate. One leaf had no fewer than 19 small caterpillars on it; the larger caterpillars were fewer to the leaf! We then made our way to the upper car park where a particularly attractive weed the Large-flowered Hemp-nettle *Galeopsis speciosa* was growing. It has large, pale yellow, Deadnettle-like flowers with a deep purple lip.

From there we made our way between the two lochs and round the upper one. Attractive tall marsh plants included the Great Willowherb *Epilobium hirsutum*, Wild Angelica *Angelica sylvestris*, Valerian *Valeriana officinalis*, Marsh Woundwort *Stachys palustris* and Marsh Thistle *Cirsium palustre*. Water Mint *Mentha aquatica* and Water Forget-me-not *Myosotis scorpioides* were flowering closer to the water and Amphibious Bistort *Persicaria amphibia* spread across the surface. Large patches of Bottle Sedge *Carex rostrata* and Water Horsetail *Equisetum fluviatile* were growing in the water, and vegetation dragged out of the loch included Canadian Waterweed *Elodea canadensis*, Water Milfoil *Myriophyllum sp.* and Rigid Hornwort *Ceratophyllum demersum* – unusual this far north.

We did not find the Mudwort *Limosella aquatica* which is supposed to grow by the loch, but we did find a small stand of another unusual flower, Nodding Bur Marigold *Bidens cernua*. Near the Bur Marigold was a good deal of Common Spike Rush some of which was infected by a type of Ergot *Claviceps nigricans*, while other flower-heads had small orange patches on them. A sample was taken to Professor Roy Watling who thought it might be a Fungus *Fusarium aqueductum* but this requires confirmation. Elsewhere Mary Clarkson found a Smut *Tilletia monieri* on flowers of Reed Canary Grass - of which there seem to be rather few records.

Once the sun came out more insects put in an appearance. Ringlet and Green-veined White Butterflies flitted about, joined in places by the Small and the Large ‘Cabbage’ Whites from a nearby field of Brassicas. Common Blue Damselflies *Enallagma cyathigerum* were plentiful near the water along with rather fewer Blue-tails *Ischnura elegans*, and we disturbed quantities of Common Darter Dragonflies *Sympetrum striolatum* which like sunbathing on open paths and vegetation.

Above the top reservoir is a large patch of woodland, a former Forestry Commission plantation which was sold off and clear-felled in 1996. It was bought in 2000 by a small syndicate of tree-lovers who have since planted it up with native trees, which seem to be growing well. There are still a few Sitka Spruce *Picea sitchensis* dotted about, seeded no doubt from the former commercial forest. Sitka Spruce is very happy in Britain; it was here in inter-glacial times, and having been re-introduced it looks as if it's here to stay.

Descending from the upper reservoir we had a view across a stream of a pure white Knapweed plant growing beside a ‘normal’ one with deep red-purple flowers. They formed a striking combination.

It was a pity about the early rain, but at least we all had plenty of time to dry out in the afternoon sun.

Jackie Muscott

Dere Street

Date 25th August

Leader Mary Clarkson

The Walkers

Last year we had followed the section of Dere Street, the Roman Road from York to the Forth, from Harestanes Visitor Centre in the Borders to Forest Lodge a few miles farther north. This year's excursion was an attempt to follow a section of Dere Street farther south, finishing at Harestanes.

The bus in which we had travelled from Edinburgh dropped us on a very minor road at Cappuck, where there had been a fort in Roman times but no trace of which was visible to our untrained eyes. This section of Dere Street is a very wet one at the best of times and on a rainy day in August after a wet summer, the walk was a trudge with a lot of time spent dodging flooded parts of the 'Street'. However, the route was not without interest and we started out by looking at a hedge of Hornbeam *Carpinus betulus* with its dangling clusters of fruit, small nuts covered by large bracts. Hornbeam is not very common in Scotland and so it was interesting to see further specimens along most of our route. The commonest umbellifer along our way was Rough Chervil *Chaerophyllum temulum* with its purplish, solid, hairy stems swollen below the nodes, flowering after Cow Parsley *Anthriscus sylvestris* and before Upright Hedge-Parsley *Torilis japonica*. There were loads of Chanterelles *Cantharellus cibarius* near our lunch spot and some of us made sure of a tasty accompaniment to our evening meal. The most interesting plant we saw, to my mind, was Trailing St John's Wort *Hypericum humifusum* which encroached on the path for several yards in one section. Soon we crossed the A698 and joined the part of the route looked at in greater detail by the botanists.

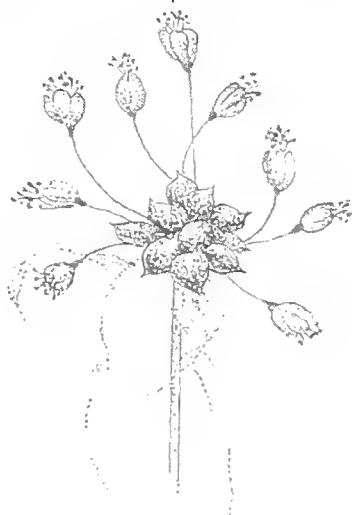
Mary Clarkson

The B(otany) Group

Some of the party elected to 'do' just the north end of the walk, following the Jed Water and then the Teviot from the A698 to the Harestanes Visitor Centre. We had a more leisurely day than the rest of the party and more time to explore this section of the walk.

The first part of the journey was through woodland where we soon encountered a tree stump densely covered with tiny mushrooms 'Fairies Bonnets' *Coprinellus disseminatus*. There was also a fine selection of tall late-flowering woodland grasses: Bearded Couch *Elymus caninus*, False Brome *Brachypodium sylvaticum*, Hairy Brome *Bromopsis ramosa* and Giant Fescue *Schedonorus (Festuca) giganteus*.

And tucked away behind some bushes we found a nice little patch of Keeled Garlic *Allium carinatum*, a very distinctive member of the onion family with a head of pink flowers and bulbils with two very long spathes.



A NICE LITTLE PATCH OF KEELED GARLIC

It had come on to rain in the wood and we had lunch there in the shelter of the trees. However by the time we emerged into the open it had brightened up and we soon became aware of three Buzzards overhead. But before long our eyes were on the ground as we encountered some uncommon plants in a field sown with wildflower seed. There were two Persicarias: the common Redshank *Persicaria maculosa* which is usually pink, and its rarer cousin Pale Persicaria *P. lapathifolia* which is greenish-white with glands on the stem. More colourful were Corn Poppies *Papaver rhoeas* and Bugloss *Anchusa arvensis*, but Corncockle *Agrostemma githago* which has showy purple flowers had gone over.

Further along there were Oak trees in fruit, but many of the acorns had been attacked by a Wasp *Andricus quercuscalleis* which lays its eggs in the young acorns, producing grotesque Knopper Galls. These were first recorded in south-east England in the 1960s and by the turn of the century were being found in Scotland.

Soon we were crossing the river and entering the grounds of Monteviot House of which we had good views across the lawns before coming into woodland again. Broad-leaved Meadowgrass *Poa chaixii* had been planted in woodland near the estate boundary and had spread outside the grounds. It's a very handsome grass often planted on estates, with very broad leaves where the 'boat ends' characteristic of *Poas* are particularly obvious. Before long we were in the grounds of Harestanes Country Park and were heading for the restaurant and a cup of tea, at the end of a relatively easy and very pleasant day.

Jackie Muscott

Footnote: Two members of the party elected to stay and explore the grounds at Harestanes, and after a pleasant walk noticed an art exhibition being held in the complex. They went in to have a look and found they had gate-crashed an official opening, for they were offered wine (which they say they refused) before enjoying the pictures.

Plean Country Park

Date 1st September

Leader Jean Long

Ten members assembled in the car park at Plean CP on a rather dull morning. The park was once owned by William Simpson, a wealthy East Indies trader who returned to Scotland and acquired the estate around 1800, building Plean House soon afterwards. In 1894 Walter Thorneycroft, who owned the Plean Coal Company bought it. On his retirement in 1929 he moved to Devon, but the family retained ownership. Coal was mined locally until 1963 and the house abandoned to the elements in the 1970s. Stirling Council purchased the estate in 1988 and turned it into a Country Park. What remained of the coal mining were two bings which now show a healthy regeneration of mature trees, mostly Birch with Lingon heath as an understorey.

The party headed initially into mature woodland near the ruins of Plean House, noting Enchanter's Nightshade *Circaea lutetiana* and several Ferns such as Broad Buckler *Dryopteris dilatata* and Hard Fern *Blechnum spicant*. Those with an eye for rust Fungi noticed some on Brambles.

At the pond, lack of sunshine meant there were no insects in flight and consequently the flowers of the Fringed Water Lily *Nymphaeoides peltata* were closed. (How many of you know that this flower featured on a 13d stamp brought out in 1964 for the International Botanical Congress held in Edinburgh? Roger Holme amazed me when he told me this.) Reed Sweet Grass *Glyceria maxima* was also seen here as was an interesting 'Chocolate Tubes' slime mould *Stemonitis fuscus* – see Eunice Smith's report on the day's fungal finds, at the end of this account.

The ruins of Plean House were now visible and around it two Sedges were found - Wood Sedge *Carex sylvatica* and Oval Sedge *Carex leporina*. There was also Eyebright *Euphrasia* agg. and the Greater Birdfoot Trefoil *Lotus pedunculatus*. Swallows were flying overhead.

Leaving the front of the derelict Plean House we continued on a path through the woods leading to a bridge over the Plean Burn. On the way I pointed out a fossilised tree branch embedded in a stone. Having passed the stables, the stone wall on our left had Three-veined Sandwort *Moehringia trinervia* and Lady Fern *Athyrium filix-femina* growing over it. We passed an old Walnut *Juglans regia* which had been cut down and was regenerating from the base. The open grassy area now to our right was formerly a bleaching green. It was on a wall along the edge of this that Vladimir spotted a plant growing profusely. On picking one it came off, roots included. This revealed the nodules characteristic of Figwort *Scrophularia nodosa*. In the past these were used to treat piles and scrofula. (See Jackie Museott's report page 25 in the 2011 Journal for more information about this old medical practice.)

Having passed the ruins of the Gamekeeper's Cottage we turned right along the Horse Trail. As well as there being a Nature Trail, a Woodland Trail, a Heritage Trail and an Estate Trail the one we followed most of the day was the Horse Trail. Just before we turned to climb up onto the South Bing we were delighted to come across a patch of Broad-leaved Helleborine *Epipactis helleborine*. The flowers however were over.

There are two bings in Plean Country Park - the North and South Bing. These once barren heaps of coal waste on the edges of the park now show evidence of the work of nature over a few decades. Our gentle climb up was amply rewarded. Young Birch trees had below them a wonderful carpet of lichens, mosses, heather and wild flowers. For me it was the lichens which were the star attraction. When I first visited here I thought the ground looked as if it was covered with snow. Thanks to Neville, who identified six species of lichens, I can report that on the two bings we saw *Cladonia portentosa*, *C. furcata*, *C. squamosa*, *C. gracilis*, *C. floerkeana*, and *C. chlorophaea*.

Half way along the top of the South Bing we stopped for lunch surrounded by this lovely plant habitat. The weather was improving as we continued along the bing and gradually down to enter a mature woodland area of mainly Scot's Pine, Oak, Beech and Birch. Being on the edge of the estate we were at times able to get good views south-east over the countryside towards Falkirk. Eventually we came down onto the South Drive, walking beside a burn. It was along here that we realised we had company in the form of a Common Hawker Dragonfly *Aeshna juncea*. We stopped to admire it and tried to keep track of it as it flew hither and thither around us. At the end of the South Drive we came out onto the main road through Plean towards the church. A visit to the churchyard provided us with some interesting old gravestones which had on them long lists of men who had died in the 1800s. Just before re-entering the woodland we admired the views north to the Ochil Hills.

The sun had now come out and with it came the Butterflies. On turning off the path down into an open area with lots of flowers in bloom there were over a dozen Peacocks and two Small Tortoiseshells flying around. Then we were treated to a Common Hawker resting on a tree. This gave the photographers amongst us a great photo opportunity.

Soon we were up on the North Bing which again provided a lovely walk on paths among Lichens, Mosses and Birch. Although rather boggy in places, it was now sunny with blue skies above. I was hopeful that the two ponds we were approaching would provide us with more insect life and we were not disappointed. Thanks to Neville I can report that we saw 5 Common Emerald Damselflies *Lestes sponsa* and three species of Dragonflies - a Black Darter *Sympetrum danae*, 2 Common Darters *Sympetrum striolatum* and 8 Common Hawkers *Aeshna juncea*. For me the highlight of the day was Neville's keen eyes spotting a Caterpillar of the Elephant Hawk Moth *Deilephila elpenor* feeding on Marsh Bedstraw *Galium palustre*.

A new short section of path had recently been created leading away from these ponds and already plants had begun to colonise the cleared ground to either side. We found Sneezewort *Achillea ptarmica* and Common Hemp-nettle *Galeopsis tetrahit*.

Soon we were out of the woodland into a large open area stretching across to Plean House. This is the wildflower meadow which in summer has pathways mown across it, but otherwise is left to grow wild. We were too late in the year to see the Orchids in flower but in summer Greater Butterfly Orchids *Platanthera chlorantha* and Common Spotted Orchids *Dactyloriza fuchsii* are in bloom. Some common wild flowers were still out including Knapweed *Centaurea nigra* and Yellow Rattle *Rhinanthus minor*. Peacocks and Small Tortoiseshells were enjoying the sunshine.

The last open area we walked across, near the end of our visit, added a few more insects to our list. We saw a Cuckoo Bumblebee *Bombus sylvestris* and two caterpillars of the White Ermine Moth *Spilosoma lubricipeda* going 'walkabout'. A short way along the North Drive then brought us back to the car park and so to the end of an interesting day as we too went 'walkabout' around Plean Country Park.

I would like to thank Eunice Smith for the fungal report, Lyn Blades for giving me her observations for the day and Neville Crowther for his list of insects, lichens and fungi. I am also indebted to Neville for turning my hand-written report into what appears here.

Jean Long

**Fungal Finds in Plean Country Park
Beefsteaks and Chocolate Tubes**

A multitude of Lichen fruiting bodies were seen on the *Cladonia*. It was no surprise to see mini-brackets of the common *Trametes versicolor*, *Stereum hirsutum* and *Bjerkandera adusta*. The latter is identifiable by the blue-grey colouration of the underside and by a musty smell. Also attached as a bracket on deciduous trees throughout the woodland were examples of *Ganoderma australe* (=*adspersum*). This is fairly easily distinguished from *G. applanatum* as the edge of *G. australe* is rounded whereas that of *G. applanatum* is 'sharp'. It is also easily distinguished from *Heterobasidion annosum* as that grows on coniferous trees and has a strong smell of turpentine.

Other relatively common finds were *Mycena acicula* (nestling among Moss), *Russula cyanoxantha* (halfway down a steep bank under trees) and *R. atropurpurea* (favoured by a Slug having a snack lunch). Ena Gillespie identified this Slug as *Arion circumscriptus*. *Hygrocybe coccinea* was also a welcome find. More unusual were two large clusters of what appeared to be *Gymnopilus junonius* at the base of two adjacent tree trunks.

One of the other less common finds was a very young *Fistulina hepatica*. (Beefsteak Fungus – yes you can eat it!). So far as we could detect it was growing on a completely dead trunk of *Castanea sativa* (Sweet or Spanish Chestnut). The tree had fallen right through the young branches of a neighbouring *C. sativa* and then been cut fairly near the rootball. The Fungus was between the cut-end of the stump and the tree roots.

Our attention was drawn to a lovely tiered show of *Gloeophylleum sepiarium* growing on the end of one of the wooden benches. This has rusty gills some of which are almost maze-like but the top of the fungus is a darker brown with a light fawn band before a white border. (Always check for *G. sepiarium* at the end or along the edge before you sit down on a conifer bench - the Fungus appreciates the substrate as much as you do!)

However, although some could be identified on the outing, others were more puzzling. A fascinating myxomycete was photographed in different stages of development. The last stage was a close forest of minute parallel stalks with long dark brown caps. It has been suggested that it may have been *Stemonitis fuscus* which is known as Chocolate Tube Slime Mould. However the particular specimen has not been the subject of microscopic identification.

Emmice Smith

A long weekend in the Cairngorm National Park

Date 7 - 9th September
Leader Neville Crowther

The Journey North 7th September

We made our initial meeting point and comfort stop at the SWT reserve at the Loch of Lowes. We heard again the story of the Osprey 'Lady' who had raised almost 30 broods of young at the nest opposite the hide. After another successful breeding season she had already set off back to Africa, but her mate and the one male juvenile of the year were still in the area. Siskins, Great Spotted Woodpeckers and Red Squirrels were active around the feeders. On the water were Great Crested Grebes, Goldeneye and a large number of Tufted Ducks in eclipse.

We were soon back on the A9, crossing Drumochter in sunshine and meeting each other again at the Uath Lochans in Glen Feshie for lunch. Aander round the boardwalks and forest paths took up most of the afternoon. We were captivated by the profusion of Dragonflies. Most numerous were Black Darters *Sympetrum danae*. At least 30 were seen with several copulating pairs. Half a dozen Common Hawkers *Aeshna juncea* patrolled the Sphagnum lawns with authority, all males displaying their sky blue coloration. Unexpectedly we had a similar number of Northern Emeralds *Somatochlora arctica*, with dark green livery (in effect black). The poor summer had presumably delayed emergence. The bog vegetation occupied us for some time with bright green, yellow and red splashes of various Sphagnales, the autumnal orange of Deergrass tussocks *Trichophorum cespitosum* agg., and the two Cotton-grasses *Eriophorum* sp. dominating the plant community.

The open water had White Water Lilies *Nymphaea alba* and Bogbean *Menyanthes trifoliata* often with fringing Reed *Phragmites australis*. Returning to our cars through the surrounding Pine forest we browsed through the Ferns and found Broad Buckler *Dryopteris dilatata*, Male *D. filix-mas*, Lemon-scented *Oreopteris limbosperma* and interestingly Hard Ferns *Blechnum spicant* with their fertile shoots, recently emerged, almost all nibbled off by Deer. A strikingly different patch of Oak Fern *Gymnocarpium dryopteris* attracted much attention. Heather *Calluna vulgaris*, Cowberry *Vaccinium vitis-idaea* with red berries, and Blaeberry *Vaccinium myrtillus* with purple berries grew densely under the trees with 'teddy bear' Moss *Rhytidiodelphus squarrosus* dominating the ground layer.

We left for Grantown following the picturesque back roads via Insh, Colylumbridge and Nethy Bridge and after dropping Vlad at the campsite, checked in at the Grant Arms – bath time then dinner –Ahh!

Addendum - the following day Betty Smith, who was gamely staying with us at the Grant Arms, visited the Uath Lochans with much support from daughter Mandy and her partner Drew. They spent several hours there and were delighted to see several *Odonata*. This was, of course, one of the Strathspey sites at which she and Bob did much of their original investigations into the hitherto little known Northern Emerald Dragonfly and Northern Damselfly, almost a lifetime ago. I'm sure she enjoyed that bit of 'memory lane'.

Neville Crowther

Mountain Walk to Coire an Lochain and Lurchers Crag Saturday 8th September

On a beautiful, hot sunny day, a group of six Nats led by Neville Crowther had a very interesting trip in the Cairngorms. Gathering at the ski car park we found that the heat had brought out the midges in particularly vicious mood! Before long however there was enough wind to make walking comfortable and midge-free.

Early in the walk we came upon a patch of Dwarf Cornel *Cornus suecica* although the flowers were past. Continuing up the path we saw Wavy Hair Grass *Deschampsia flexuosa*, Heath Rush *Juncus squarrosus*, Eared Willow *Salix aurita* and Bog Asphodel *Narthecium ossifragum*, which had fruited lower down but was blooming beautifully in damper spots above. Devil's Bit Scabious *Succisa pratensis* and Tormentil *Potentilla erecta* were commonly seen in drier areas. The grass *Festuca vivipera* with its plantlets clearly visible was examined with interest.

Neville pointed out interesting geological features such as the lateral and terminal moraines of the glaciers that had helped sculpt the area, and whose melt waters had first forced through the western ridge to form the Chalamain Gap, and only later to break through the line of the present Allt Mor. He pointed out the different mineral crystals of the granite, quartz, mica and feldspar, and the significance of their different resistance to erosion. Around 800 metres as the Ling *Calluna vulgaris* grew less strongly, we found Bearberry *Arctostaphylos uva-ursi* and Cloudberry *Rubus chamaemorus* growing close to the path, without flower or fruit. Both sub-species of Crowberry was seen, lower down *Empetrum nigrum* ssp. *nigrum*, and higher up *E. nigrum* ssp. *hermaphroditum*. Lunch was enjoyed in warm sunshine with excellent views into the 'double' corrie of Coire an Lochain, where two Ravens entertained us.

We continued upwards seeing Woolly Fringe-moss *Racomitrium lanuginosum*, Dwarf Juniper *Juniperus communis* ssp. *nana* Alpine Lady's Mantle *Alchemilla alpina* and Stiff Sedge *Carex bigelowii*. Three different Club Mosses were seen, Fir Club Moss *Huperzia selago*, Stag's Horn Clubmoss *Lycopodium clavatum* and Alpine Clubmoss *Diphasiastrum alpinum* at one point growing in close proximity, allowing comparisons to be made.

Mountain Hare and Ptarmigan were evidenced by droppings as we approached the little summit of Miadan Creag an Lethchoin at 1083m. Near this area there were flushes containing spongy mats of the grey Liverwort *Anthelia julacea* and to our delight on the rocky plateau we found Least Willow *Salix herbacea*, a true arctic alpine, as well as Creeping Azalea *Kalmia procumbens* and soft carpets of Moss Campion *Silene acaulis*. A high point in every way! Vladimir was ecstatic over finding a fruiting body of *Russula nana* inside a network of Least Willow stems; the mycorrhizal connection is well known. Before descending we had good views into the deep glaciated rift, the Lairig Ghru, which connects Strathspey and Deeside. Returning, our route down gave further lovely views of Coire an Lochain, and the Great Slab above which annually is the site of a spectacular Spring avalanche.

Back at the car park we relaxed, chatting briefly in the sunshine, as the only rain shower of the day fell on distant Aviemore far below.

Liz Johnstone

The Woods and Marshes of Strathspey

Sunday - 9th September

A prompt start, with good weather still persisting, found around ten of us at Loch Garten RSPB reserve by 10am. Red Squirrels, Coal Tits and Siskins entertained us on and around the feeders at the Osprey centre, before we went for a morning stroll through the Pine woods to Loeh Mallachie.

Vladimir's enthusiasm for Fungi really sparked an interest from the rest of us. The abundance of species included many 'brittle gills' such as *Russula emetica* & *R. badia*; the less harmful *Amanita spp. crocea*, *citrina* and *rubescent*; lemon yellow splodges of Flowers of Tan *Fuligo septica* like the remnants of a paint-ball event; the Tooth Fungi *Hypniellum caeruleum* and Wood Hedgehog *Hydnin repandum* were both interesting finds, as were hosts of *Laccaria laccata* and a few Chanterelles.

We discussed the unusual nestboxes on island trees at Loeh Mallachie whilst having lunch. We quickly forgot about this provision for Goldeneyes when Helen became aware that she was being bombarded by falling contorted Pine cones and that the culprits were a large party of Crossbills in the crowns above. After watching for some time we walked on. Later, we again had our attention focussed by a protective fence around a Wood Ant nest and a notice explaining the ecological importance of this species in Pine woods.

As we returned to the cars, several people decided to head back south, as rain had been forecast. A few of us decided on a quick five minute visit to a well known Dragonfly lochan before leaving the forest. It became an hour-long stopover, because of the large number of Black Darters *Sympetrum danae*, and some Common Hawkers *Aeshna juncea* and Emerald Damsels *Lestes sponsa*. They were involved in mating activities, oblivious to our presence only feet away. We were sorry that others were unable to share the experience.

Another 'last stop' was made at Insh Marshes. This is possibly the largest wetland in Scotland and an important wintering site for bird visitors from the north. At first we thought that there was little activity. We watched half a dozen Roe Deer browsing the marshes and discussed the truncated esker which occupies much of the view. We decided the truncation had possibly resulted from the use of the gravel to build the motte for Ruthven Barracks only a few hundred metres away. Suddenly a female Marsh Harrier emerged from somewhere to quarter the reed beds and pools, sending hundreds of previously unseen birds skywards. There were large flocks of Peewits, Starlings, Teal and Mallard all counted in scores. The excitement over, we all headed for the A9. Vladimir's perpetual enthusiasm had persuaded us all to make one last diversion to look for Salmon leaping, despite the threat of rain. After losing our way for a time, the rain began to fall in earnest and the agreement that the weekend was over was made. We would surely get back in time before the 'Clippie' closed.

Neville Crowther



Cairngorms - Splinter Party
Thursday 6th - Sunday 9th September

Laura and I set off a day early for the Cairngorms and our long weekend began a day early with an evening trip to the Speyside wildlife hide in the heart of the Rothiemurchus native Pine forest. Here we waited patiently and were rewarded by a family of 6 Badgers and a young skittish female Pine Marten.

The following morning we gleefully took advantage of the sunshine and fair weather and took a leisurely walk up to Coire an Lochain, on almost the same path as the rest of the Nats were to follow the very next day.

Apart from the spectacular scenery and the vibrant colour of the Deergrass *Trichophorum germanicum*, other highlights of the walk included a glimpse of a Mountain Hare and accidentally flushing 3 Ptarmigan from their comfortable perch amongst the rocks. Botanical species were observed with interest, particularly towards the plateau where the snow bed community offered carpets of Woolly Fringe-moss *Racomitrium*

lumiginosum and patches of Three-leaved Rush *Juncus trifidus*, Trailing Azalea *Kalmia procumbens*, Bog Bilberry *Vaccinium uliginosum* and Stiff Sedge *Carex bigelowii*. Incidentally, this was where we were also delighted by the sighting of a Frog.

A morning walk with Katie the BWWC Ranger on Saturday took us through the idyllic Anagach woods where the Red Squirrels were jumping across the tops of the canopy and groups of Long-tailed Tits, Siskins and Coal Tits were flying through. We were treated to a fleeting glimpse of a Speckled Wood Butterfly *Pararge aegeria*, which later settled on the side of the path for a long bask in the sun. The walk circled down towards the edge of the River Spey, looking beautiful in the sunshine, where we were greeted by a Common Sandpiper, Dippers, Grey Wagtails and a Heron.

Midday saw a trip to Avielochan where a single juvenile Goldeneye and numerous Little Grebes were feeding on the water. A couple of Buzzards circled above, whilst the Swallows kept us entertained during our lunch.

In the afternoon we enjoyed a circular walk around Loch an Eilein, encompassing a small diversion to Lochan Deo via the Achnagoichan Farmstead. Highlights included an Osprey flying over, Roe Deer and plenty of Red Squirrels. The mature Scots Pine *Pinus sylvestris* trees were full of character with Lichens dripping from every branch. There were carpets of Ostrich-plume Feather-moss *Ptilium crista-castrensis*, big Shaggy-moss *Rhytidiodelphus triquetrus* and Waved Silk-moss *Plagiothecium undulatum* amongst the Blaeberry *Vaccinium myrtillus* and Heather *Calluna vulgaris* that dominated the woodland floor. As the afternoon temperatures cooled, the birds became more active with sightings of Goldcrests, Coal Tits, Treecreepers and Chaffinches.

On Sunday we joined the rest of the Nats to enjoy a morning at Loch Garten and the afternoon at Insh Marshes.

Katherine White

Garleton Hills

Date 15th September

Leader Pauline King

Our party of 15 set off from Athelstaneford on a day forecast to be warm and sunny although strong westerly winds meant it was going to be important to find a sheltered spot for lunch. It also proved challenging conditions for Butterfly-spotting as no sooner had they settled they were up and off again in the wind.

The East Lothian Ranger service do not monitor this area but had suggested that it would be good for grassland Fungi species such as Waxcaps *Hygrocybe* spp. and *Entoloma* spp. on the hill slopes of the fields grazed by cattle. The east Area Ranger had also reported that Pink-footed Geese have started to come in to Aberlady Bay, to the North of the Hills and they use the fields in the area for daytime grazing.

The walk started on the path down towards the Cogtail Burn surrounded by Hawthorn *Crataegus monogyna*, Brambles *Rubus fruticosa* and Nettles *Urtica dioica*, where a Comma Butterfly *Polyommatus icarus* was seen. Also 3 species of Bumblebee: Common Carder Bee, *Bombus pascuorum* Buff-tailed *Bombus terrestris* and, higher on the walk, a bald male Red-tailed Bumblebee *Bombus lapidarius*.

At a sheltered bend in the path just before the gate at the burn we stopped to watch Common Darter *Sympetrum striolatum* and Southern Hawker Dragonflies, *Aeshna cyanea*. Along the length of the burn, small mixed flocks of Finches flew back and forth settling on the Thistle seed heads or in the Hawthorn or Elder *Sambucus nigra* bushes. We turned up along the field margin, stopping to watch Pied Wagtail in the adjacent ploughed field.

Some of the weeds on the edges of the fields were interesting: Bugloss *Anchusa arvensis*, Sun Spurge *Euphorbia helioscopia*, Charlock *Sinapis arvensis*, Field Pansy *Viola arvensis* and a single plant of Flax *Linum usitatissimum*. Flax was grown as a crop in various places a few years ago. Haresfoot Clover *Trifolium arvense* and Hop Trefoil *Trifolium campestre* were growing on the path, both interesting plants and the Haresfoot quite uncommon.

Once on the ridge we walked along the farm track towards the remains of Barnes Castle, a curious vaulted fortification that was never finished after being commissioned by Sir John Seaton of Barnes who died in 1594. Here there was a good deal of Green Alkanet *Pentaglottis sempervirens* and Hemlock *Conium maculatum*. A single Buzzard was seen soaring above the sloping fields.

The lunch stop presented itself as we turned on to a sheltered part of the track at the walls of Barney Mains Farm and we soaked up the sunshine before continuing round the farm and its outbuildings towards the patch of open woodland, mostly Oak and Beech at Kae Heugh. The Garleton Hills include outcrops of lower carboniferous volcanics (trachyte lavas) that are contained entirely in the Calciferous Sandstone series. These rocks outcrop in the form of escarpments at Kae Heughs – named on the OS 1:25,000 map NT5176).

Diverting from the path through a gate we explored the grazed grasslands towards the escarpment edge where we had tremendous views over Fife. On the hill - a few new plants:

Tormentil *Potentilla erecta*, Harebell *Campanula rotundifolia* and various ‘yellow daisies’ - Catsear *Hypochaeris radicata*, Mouse-ear Hawkweed *Pilosella officinarum* and Autumn Hawkweed *Scorzoneroides autumnalis* (formerly *Leontodon autumnalis*).

The remainder of the walk was re-tracing our steps and star spot was a female Wheatear, obligingly busying herself on the tracks allowing excellent viewing. We had no sightings of the anticipated Hare, or Roe Deer *Capreolus capreolus* or Pink-footed Geese and the lack of recent wet weather may have accounted for few fungi. Red Admirals *Vanessa atalanta* were common sightings with a few Peacock Butterflies *Inachis io*. The excursion was completed back at Athelstaneford Church where a wedding party, also enjoying the sunny day, was preparing to depart for the reception.



RED SQUIRREL

Pauline King Botany: Jackie Muscott

Dawyck Botanic Garden

Date 22nd September
Leader Chris Ellis

As we left Midlothian the weather was glorious with perfect blue sky, bright sun and windless after a morning which began with a ground frost and temperatures in low single figures. Crossing the Meldons, the mist filled valleys were evidence of the thermal inversion, even though it was quickly dispersing.

Arriving at Dawyck we found a dozen big folk assembling plus two little folk. Half an hour after Chris Ellis had begun to reintroduce us to lichens as a group, we still had not moved more than thirty metres. The mature broad leaved trees near the entrance proved to be fertile ground for him to remind us of what we had forgotten since our last Lichen trip and to demonstrate the fundamentals of lichen classification and recognition. We were soon peering with hand lenses on tiptoe and confirming thallus forms, crustose, foliose and fruticose..... Common species names began to reappear on our lips. Perhaps we hadn’t forgotten! Apart from not being able to find ‘jam-tarts’, better known as lecanorine apothecia, we saw other reproductive structures. isidia, pycnidia, perithecia and soredia. We learnt about the cortex and medulla and how the photosynthetic partner could be an alga or a i, whereas the morphology would be determined by the fungal partner.

Soon the grey green shapes cloaking every tree trunk began to be recognisable as distinct from others and names began to be associated with form. We now had a three dimensional matrix in which to separate one species from another. This foliose Lichen attached to tree trunks and reproducing by isidia was *Parmelia saxatilis*. The crustose one also on tree trunks, white and warty, but producing soredia was a *Pertusaria*: but which *Pertusaria*? A finger tip wetted and touched to the tongue revealed how bitter it was - *Pertusaria amara*! And what about this fruticose pale greenish much branched lichen dangling from tree branches and trunks with soredia coating the thallus. Its name was *Usnea subfloridana*.

Lunch was taken early. Perhaps our leader had noticed saturation point approaching. In the gravel of the path where we sat, Rebecca found an object resembling khaki brown jelly. Its name was Nostoc, a very primitive organism belonging to a very early life form – a cyano-bacterium, a blue-green alga. Not only had I never seen one before, but I had always imagined them to be microscopic in size. More relevant to today, it is a common photobiont partner of many of the darker coloured Lichens that we were to see. However the sun was restful and the Ellis boys entertained. Simon, the elder, but still only four, brought us Lichen-laden branches. He had played this game before! Soon we resumed our stroll moving uphill towards the Cryptogam Sanctuary.

Then, there was a lichen unlike any we had yet seen. It lived on a tree trunk, preferring cracks in the bark but it was formless, a powdery coating with no reproductive bodies, sexual or asexual. The distinctive feature was the bright yellow colour and it was called *Chrysotrichia candelaris*. The form was new to us – the word leprose, meaning powdery, was added to our list of thallus types that we already knew. Like many lichens this species is very sensitive to pollution, and was used by Francis Rose as one of his biological indicators of air pollution levels. This noteworthy investigation last century was one of the most elegant national surveys to be devised.

Here at last we found those elusive ‘jam-tarts’ and now they seemed to be everywhere. Since the Peebles cake shop had been unable to provide Chris with his edible visual aid, we were all agog to see them. Mostly they belonged to a crustose genus, *Lecanora*, and here at least, it lived on smooth barked trees.

The final quest of the day was a search for the Pinheaded apothecia of Lichens living in cracks and splits in mature rough barked trees. On the point of giving up they were found - *Calicium viride* - embedded in the powdery yellow thallus of *Chrysotrichia* growing on Oak bark.

We then trundled downhill for coffee and tea, feeling a little like lichenologists.

Neville Crowther

Devilla Forest

Date 29th September
Leader Wilma Harper

Devilla Forest lies on the north side of the Forth near Kinocardine and Tulliallan. It is unusual in the forests of central and southern Scotland in being dominated by Scots Pine. The underlying geology is sandstone of the Passage Formation which is Carboniferous in age and gives rise to a high quality silica sand which is worked on the fringes of the forest. It gives a free draining, acid soil suitable for Pines and an associated ground flora. The terrain consists of low ridges and depressions from glacial deposits of drumlins.

The route took us away from the path by the car park, popular with dog walkers, into the main part of the forest. We were headed for a planned lunch stop by the Keir Dam, not much more than 1km away but with plenty to see in mainly Scots Pine stands but also Birch, Larch and Spruce. A marshy area with a small pond attracted attention too. We turned off the main forest road to reach the side of the Keir Dam, following the boundary of the abandoned forest nursery which had an unusually high density of trees as a result. Those of us at the front were brought to a halt by a squeal from the trailing group as one of our party did not share Jean Long’s fascination for a nest of tiny spiderlings! A common spider *Enoplognatha ovata* had been discovered in leaf litter defending its blue-grey egg capsule which had 20 or so spiderlings dashing about when disturbed.

The wooded edge by the dam offered a pleasant spot for lunch but on the day it turned out to have been a serendipitous choice. Much of the area is Reeds and Horsetails and in the autumn sunshine the Dragonflies were in full flight. There were an estimated 150 Black Darter *Sympetrum damae*, many ‘in cop’, a few egg laying in tandem; Common Hawker *Aeshna juncea* c.20; mostly males although small number of females egg laying in vegetation; 2 male Common Darter *Sympetrum striolatum*. A few Common Hawkers and Black Darters had been seen on the rides as we walked into the forest but nothing prepared us for the aerial display we were treated to as we sat having our sandwiches. In addition, an Emerald Damselfly *Lestes sponsa* was recorded in the drainage channel. One oddity was the presence of 3 fairly mature Mute Swan cygnets on the dam, but with no sign of adults.

The plant list for the dam included: Marsh Bedstraw *Galium palustre*, Water Horsetail *Equisetum fluviatile*, Lesser Spearwort *Ranunculus flammula*, Marsh Cinquefoil *Comarum (Potentilla) palustre*, Ragged Robin *Silene (Lychnis) flos-cuculi*, Marsh Pennywort *Hydrocotyle vulgaris*, Marsh Speedwell *Veronica scutellata*.

As we walked round the botanists found plenty of interest (and we ended up putting arrows of sticks at junctions to help them keep to the route!). Plants of note included: Wood Small Reed *Calamagrostis epigejos* an attractive tall grass; Climbing Corydalis *Ceratocapnos (Corydalis) claviculata*, an ancient woodland indicator species; Trailing Tormentil *Potentilla anglica*, a true species, but of hybrid origin between *P. erecta* and *P. reptans*; Slender Rush *Juncus tenuis*, introduced over 100 years ago; Bristle Clubrush *Isolepis setacea*; Water Plantain *Alisma plantago-aquatica* in the small pond; Branched Bur-reed *Sparganium erectum*. (Thanks to Jackie Muscott for her list).

Forest visits in September usually yield a good list of fungi and this was indeed the case with over 40 species noted, mainly identified by Mary Clarkson and David Adamson.

The day finished with a walk along the forest road to loop round under the pylons from Kineardine power station and back to the car park.

Wilma Harper

Binning Wood

Date 6th October

Leader Neville Crowther

In 1707 the Earl of Haddington planted trees on an area of low agricultural value of just over 300 acres. This was the first large plantation in Scotland, and the shape of the wood now and its pattern of paths is almost identical to the original layout, despite the wood being felled to help the war effort in 1939-1945; its wood was used in the manufacture of Mosquito aircraft. Binning Wood was then completely replanted in the years up to 1960 and now comprises blocks of Scots Pine, Oak and Beech, with a clump of tall Eucalyptus near its south west boundary. The paths that focus on the three circular clearings may have been laid out for the driving of birds in pheasant shoots. Today, in the centre of one of these clearings, there is a monument and plaque that commemorate the completion of the replanting of the 1707 wood, encircled by a group of Rowan and Cypress trees.

On a cool but sunny morning our group of 16 assembled in the car park near the woodland memorial ground in the north west corner of the wood. After an introduction by Wilma Harper on the history of Binning Wood, we followed a muddy path direct to the wood's southern boundary where we enjoyed some warm sunshine and a much better path. There were Jays, Buzzards, and Great Spotted Woodpeckers, and John Palfrey spotted a Brown Hare in an adjacent field. However there were very, very few Fungi.

After lunch in the wood's sunny south-eastern corner we walked north through two of the circular clearings. It was in the second of these that Roger Holme identified the find of the day: a Speckled Wood Butterfly *Pararge aegeria*. By then the conifer and Oak plantations had been replaced by Beech woods *Fagus sylvaticus*, and what had been a pleasant stroll immediately became a serious Fungus Foray. At first the most abundant Fungi were the *Russulas*, *fellea*, *ochroleuca* and *mairei*. The purple Amethyst Deceiver, *Laccaria amethystea*, appeared to be more common than its dull but ubiquitous relative, *Laccaria laccata*. Boletes were represented by *Boletus chrysenteron*, and the tall fungi with the smell of raw potatoes were *Amantia citrina*. There were several species of *Lactarius*, of which *L. blennius* was perhaps the most easily recognised.

Other Fungi included several species of *Inocybe*, *Mycena*, and *Collybia*, and a small *Clitocybe fragrans*, with the typical aniseed smell. The outing ended with a brief revision session in the car park, where Mary Clarkson shared her knowledge and helped us to identify some of the more difficult Fungi that we had collected.

David Adamson

River Tyne Walk

Date 27th October
Leader Pauline King

For the first time this autumn, weather predictions were for Arctic winds and a sudden drop in temperature and while the North East of Scotland woke to a covering of snow, Haddington was clear and cold with a bright day ahead. The route from Abbeymill Bridge connecting Haddington to East Linton had been completed by the Council earlier in the year and our route took us along part of the way allowing sufficient time for observations.

While waiting in the car park next to the Walled gardens of Amisfield House some of our party heard Great Spotted Woodpecker and saw Mistle Thrush and Jay. 3 Goosander were on the river close to the bridge.

We followed the riverside path and then diverted into the woodland strip where a Sparrowhawk kill was found – the distinctive plucking of a pigeon. Carrying on through the mixed woodland we came across a Badger sett and various Fungi: *Clitocybe geotropa*, *Bisporella citrina*, *Phaeolepiota aurea*. Across the fields Roe Deer and a Hare were spotted.

The Water Bailiffs passed us at Sandys Mill where we had paused to regroup. We carried on along the river where the Grasses False Brome *Brachypodium sylvaticum*, Bearded Couch *Elymus caninus* and Hairy Brome *Bromopsis ramosa* were seen. Also surprisingly in flower Cut-leaved Cranesbill *Geranium dissectum* and Field Scabious *Knautia arvensis*.

At our sunny lunch stop on the river bank, Orange Peel Fungus *Aleuria aurantia*, Velvet Shank *Flammulina velutipes* and Candle Snuff *Xylaria hypoxylon* were found. There was also a large Bracket Fungus *Phellinus* on Aspen *Populus tremula* and is a rarity. The Aspen it was growing on was unusually large and old - and so was the Fungus. Other fungi such as *Lepiota*, *Mycena*, and *Crepidotus* were taken to be identified at the workshop arranged for the following day at Vogrie.

We were treated to a beautifully sunlit soaring display by 2 Buzzards on the way back and also 2 Jays were seen flying into the woodland strip. Other birdlife on the day: Siskin, Fieldfare, Wren, Bullfinch, Treecreeper and Goldcrest.

Pauline King

Water of Leith, Craiglockhart and Colinton Dells

Date 17th November
Leader Malcolm Lavery

Around 10 of us gathered at the Water of Leith Visitor Centre on a cool but bright November morning to explore the Craiglockhart and Colinton Dells area of the river, a section thought by many to be one of the most attractive and wildlife-rich.

We set off upstream, and at the first weir, only a stone's throw from busy Lanark road, we found an otter spraint on a rock which had the distinctive sweet 'jasmine tea' smell. A few small bones were scattered in the spraint but were too degenerated to be identifiable.

Ivy *Hedera helix* in flower was noted just upstream of the weir and Wood Sedge *Carex sylvatica*, past its best, was seen by the pathway. On dead wood we noted the Artist's Bracket Fungus *Ganoderma applanatum*, named as it can produce a dark line on a drawing surface. A small patch of the non-native evergreen 'Butcher's Broom' *Ruscus aculeatus* was found on an upper pathway, a plant that has apparently been used to sweep out sawdust in butcher's shops in days gone by. The first of a few Dippers we encountered during the day were heard, and then seen, by the footbridge leading over to Redhall walled garden. A pair of Dippers have been known to nest under this bridge for quite a few seasons now.

To the side of the walled garden lies an area known as the 'hidden meadow', which has been fairly heavily planted with fruit trees of various kinds. Crab Apple *Malus sylvestris* with an abundance of fruit still clearly visible on a few trees, and both Wild and Bird Cherry *Prunus avium* and *Prunus padus* are present.

Even Gooseberry *Ribes uva-crispa* can be found in the undergrowth. Many magnificent specimens of Teasel *Dipsacus fullonum*, were clustered towards the back wall of the garden, and Russian Comfrey, *Symphytum × uplandicum*, still in flower, covered quite a large area. Chaffinch, Blue and Great Tits, and Robin were all seen or heard in low bushes around the garden walls and beyond. A very visible group of the large grey-brown fungus Clouded Agaric *Clitocybe nebularis* was seen in ring formation.

Moving up river towards Boggs Bridge, Candlesnuff Fungus *Xylaria hypoxylon* was noted on a dead tree stump and the garden escape Yellow Archangel *Lamium maculatum variegatum*, grew alongside the allotments. A Dipper posed for photographs on a rock by the water's edge just beyond the bridge, and on the other side a Grey Wagtail darted in and out of view.

Further upstream a very well formed Earth Star Fungus *Gastrum sp.* was found among ivy. White Stemmed Bramble, *Rubus cockburnianus*, was also encountered as we made our way along the riverbank. This is an introduced species and produces inedible fruit but is valued for its appearance in gardens. A Buzzard was reported overhead – these birds have successfully become 'urbanised' in this and other areas of Edinburgh and can often be seen either perched on trees or in flight with the almost inevitable entourage of mobbing corvids in attendance.

Heading on towards Colinton, a highlight of the day was the discovery of a group of tiny, extremely photogenic orange 16-spot Ladybirds *Halyzia 16-guttata*, hibernating on top of a fencepost. They continued with their rest undisturbed by the congregation of Nats that surrounded them with clicking cameras. We lunched in the park just up from Colinton village and the weather, which had started promisingly, became squally and unsettled. Our group dispersed and made their various ways back, with memories of those incredibly cute Ladybirds to remind us of a very pleasant day out.

Malcolm Lavery

Plant Hunters at the RBGE

Date 1st December

Leader Peter Tothill

On a sunny frosty day Peter led a party of some 20 members around the Botanics. The theme was plant hunters, with a secondary theme of Champion Trees. These are trees that are the tallest or fattest of their type in Britain and Ireland. There is a surprisingly large number in the Garden, given that none look like giants. Some are hybrids or subspecies and it is assumed that most are the largest because they are the only ones recorded!

The collectors concerned included several **Scots**: Masson, Menzies, Forrest, Douglas, Fortune, Thompson, Sherriff. **English**: Banks, Wilson, Daniell. **French**: David, Farges, Delavay. **German**: Kaempfer, von Siebold. **Russian**: Maximowicz **Swedish**: Thunberg.

A reminder that collecting of new species still goes on was provided by accounts of staff from the RBGE who still explore in many parts of the world. Champion trees associated with some of the hunters included: *Populus 'Androscoggin'* (the tallest tree in the Garden, lit up in the afternoons}, *Euonymus tanakae*, *E. monbeigii*. *Ulmus pumila 'Pinnato-Ramosa'*, *Aesculus neglecta*, *A. arguta*, *Tetracentron sinense*, *Taxus chinensis*, *Cedrus atlantica 'Pendula'*.

Trees associated with the collectors, but not themselves champions, included *Tetradium daniellii*, *Pieris forrestii*, *Pseudotsuga menziesii*, *Metasequoia glyptostroboides*, *Araucaria araucana*, *Pinus armandii*, *Carpinus tschonoskii*, *Betula utilis*, *B. albosinensis*, *Pterocarya delavayi*. We also saw many Rhododendrons, in which the Garden specialises, including two that were actually in flower. In fact, there is no month in which there is not a Rhododendron in flower outdoors.

We finished up with some time spent in the Temperate Glasshouse, looking at more tender plants from South Africa, Australia and New Zealand, such as *Strelitzia*, *Pelargoniums*, *Banksias*, *Callistemon*, and the Kauri tree, with a final peep in the Montane house, where there is a small collection of the Vireya Rhododendrons, of which the RBGE has the world's largest collection, mostly in the research glasshouses behind the scene.

Peter Tothill

South Queensferry walk and lunch

Date 28th December

Leader Janet Watson

Christmas time walks with Janet have become a bit of a tradition.

Waterproofs on, we set out from the pier at South Queensferry. Very soon the rain eased off and we had pleasant stroll along to Hound Point. For most of us fresh air and exercise were the order of the day. However David provided something of natural history interest by searching for and finding a miniature Palm Tree, the unusual moss *Rhodobryum roseum*. It was growing in the same place where it was first shown to him by Joe Carlisle in 1985.

Waterproofs off, we joined the non walkers for luneh at the Hawes Inn. It was lovely to meet friends we rarely see these days, like George McDougal and John Watson, and to catch up with Roger and Eunice Holme.

In all 27 people turned out for this successful outing. Thank you again Janet.

Lyn Blades

The following reports were omitted from last year's Journal. Apologies to those who wrote them.

Glenkinnon

Date 19th March 2011

Leader Jean Murray

The Importance of Bryophytes

'They are sensitive indicators of atmospheric pollution, and their disappearance may be a warning we would be foolish to ignore, since we share the same air - rather like the canary in the coal mine.'

A myriad of microscopic Invertebrates live or take shelter in Moss, Birds and Carder Bees build their nests with it, Birds and Slugs nibble off energy-packed Moss capsules, Fungi and other plants grow on Moss, and man has used it for bedding, packing, plugging, stuffing and wiping and for treating his ills'

Before we started I asked everyone to read the above quote from the New Naturalist *Mosses and Liverworts*. Most people, as I was only too well aware, find it difficult to get started on mosses and don't share my enthusiasm, so I had decided to change my approach. This time I would concentrate on how they looked, e.g. feathery or plaited etc. There is a list of what was found.

We had only just begun to look at the cushions on the stone bridge when a car stopped beside us. It was the lady from the adjoining house asking if we were looking for Elvers in the burn. I had no idea they could be found there. She went on to tell us that 3 species of Bat are found locally, with Daubentons mainly at nearby Caddonfoot.

Our route took us along forestry tracks and Wilma used a lull in the Mosses to point out the different conifers around us. The new approach seemed to be working but eventually mental fatigue drove people to plead for lunch. The sun promptly disappeared. First arrivals found places at a picnic table, others sought shelter behind a dyke.

After luneh - no more lessons - we took the path up the other side of the burn past the knoll where it is said Sir Walter Scott used to sit writing when staying at Ashiestiel House. This took us out on to the Williamhope road. Three intrepid souls could not resist the temptation to go further and explore the possibility of finding a crossing higher up and so return by an obvious track on the other side. The rest of us decided it was too late in the day to venture into the unknown and came back by the road. Joanie was pretty certain she had heard a Raven.

Some of us rounded off the day at Clovenfords Hotel, tea available but alas no scones or biscuits!

Jean Murray

MOSSES

<u>Cushions</u> on the bridge	<i>Bryum capillare</i> <i>Grimmia pulvinata</i>	Thread moss Turned over capsules
<u>Plaited</u> on trees and rocks	<i>Hypnum cupressiforme</i> <i>Hypnum jutlandicum</i>	Cypress-leaved Plait-moss, hooked leaves Heath Plait-moss silvery leaf tips
<u>Feathery</u> on ground mostly	<i>Hylocomium splendens</i> <i>Pseudoscleropodium purum</i> <i>Klndbergia praelonga</i> <i>Thuidium tamariscinum</i>	Glittering Wood-moss. red stem Neat Feather-moss robust Common Feather-moss very fine Common Tamarisk-moss dark stem
<u>Shaggy</u> on the ground	<i>Rhytidadelphus triquetrus</i> <i>Rhytidadelphus loreus</i> <i>Rhytidadelphus squarrosus</i>	Big Shaggy-moss (teddy bear) red stems Little Shaggy-moss, Bushy and spreading, red stem Springy Turf-moss Tops star shaped, red stems
<u>Upright</u> dark green	<i>Polytrichum commune</i>	Common Haircap
<u>Flattened</u> whitish green	<i>Plagiothecium undulatum</i>	Wavy Silk-moss (white worms)

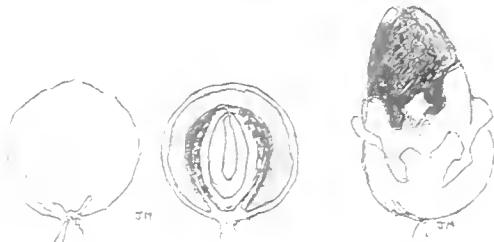
Blair Adam

3rd September 2011

Wilma Harper

The day started with a quick look at the woods and the lawns around the car-park. In the car-park, there were nice specimens of Large-flowered Hemp Nettle *Galeopsis speciosa* with characteristic dual-coloured flowers. The woods around there consisted mainly of Sitka Spruce *Picea sitchensis*, with some Norway Spruce *Picea abies*, as evidenced by two sizes of cones on the forest floor. Under the conifers, there was a massive fruiting of *Russula ochroleuca*, accompanied by occasional specimens of The Blusher *Ananita rubescens*, both species being mycorrhizal with Spruce. On fallen twigs *Calocera pallidospathulata* was in local abundance, and Chickweed Wintergreen *Trientalis europaea* was seen by some conifer stumps there.

When all had arrived, Wilma gave an introduction to the site, which was formerly a colliery. Soon after setting off, Jackie introduced Marsh Cudweed *Gnaphalium uliginosum*. Close by, there were also Wild Angelica *Angelica sylvestris* and Common Hogweed *Heracleum sphondylium* growing side by side, thus aiding recognition of these superficially similar plants. Wilma photographed and cut open a young specimen of Stinkhorn *Phallus impudicus* to demonstrate the cross-section. The fungus was still at the egg stage: it did not have any bad smell and looked palatable (this mushroom is not poisonous, and the young stages are consumed in some parts of Europe).



EGG STAGE AND 'HATCHING' OF STINKHORN

David pointed out a big tawny-coloured slug *Ariou ater* happily munching on *Russula ochroleuca*. Later on, the black and more common representatives of this species were seen. Along the path, there were abundant patches of Male Fern *Dryopteris filix-mas* and Lady Fern *Athyrium filix-femina*, and Jackie pointed out the difference in the shapes of their sporangia: kidney- as against crescent-shaped. Dorothy showed the group Pink Purslane *Claytonia sibirica* and Jackie pointed out Common Water Starwort *Callitrichie stagnalis* growing in a ditch. On one of the nearby paths Wilma found a patch of hair left by a Badger.

The first stop was at the dismantled railway where the group was copiously wetted by increased precipitation, while Wilma was showing the pictures of exotic animals on the wall. Soon Jean Long fetched some specimens of *Cortinarius* sp., *Tricholomopsis rutilans* and *Amanita fulva*, for everybody's admiration. Several plants of Melancholy Thistle *Cirsium heterophyllum* (which lacks prickles) were seen there, while in the adjacent woods, there was a massive fruiting of *Marasmius androsaceus*, and occasional specimens of *Calocera viscosa*. Along the burn the woods had substantial cover of Wood Sorrel *Oxalis acetosella*, indicating that the plantation may have been preceded by ancient woodland.

On the banks of the burn there were nice Hard Ferns *Blechnum spicant*, and along the path Lady Fern and Bracken *Pteridium aquilinum*. Jean found a Wood Woolly Foot *Collybia peronata* and numerous and very variable specimens of The Deceiver *Laccaria laccata*. (Being so variable, it is often misidentified, hence its name. JM)

Away from the path there was a *Lactarius deterrimus* showing greenish patches of drying milk, and David pointed out its subtle differences from *L. deliciosus*, which has characteristic spots on the stipe and is less likely to develop a greenish tan. On conifer debris there were occasional clumps of Sulphur Tuft *Hypholoma fasciculare*, and Mary pointed out *Gymnopilus penetrans*.

During the late morning the group came across the remains of the bridge that once took the colliery railway over the burn. There was a memorial there, and Wilma gave a talk about the historical background: many old collieries like this one were accompanied by brickworks utilising the deposits of carboniferous clays that tended to lie between the seams of coal. Bricks from the works at Kelty had the owner's name 'BlairAdam' stamped on them, and some can be seen at the monument. In addition to the historical interest of the location, there was a young single specimen of Ugly Milk Cap *Lactarius turpis*, which Mary Clarkson rather heroically tasted to prove the identification: she vouched that it was hot and acrid.

Also on Spruce litter there was a trove of *Collybia confluens* and a couple of Bonnet Caps. Usually those are difficult to identify, but on this occasion there was no problem: milk produced on broken stems of both specimens unequivocally indicated *Mycena galopus*. The litter also had a variety of *Inocybe* spp., but only one of them was an obvious *I. geophylla* with a characteristic smell and whitish appearance.

As the party headed upstream, the left bank was covered in the 'White Worm Moss' *Plagiothecium undulatum*. Among it were some specimens of a small white fungus reminiscent of *Hygrocybe nivea*. Later on, however, older specimens helped Mary to identify it as *Hygrophorus* which she later keyed out as *H. piceae*. To add to the confusion, *H. pustulatus* was also found nearby.

The gaps created by the path had a number of opportunistic broadleaved trees, e.g. some youngish Beeches and Sycamores. On a semi-rotten branch of the latter there was a nice growth of *Crepidotis mollis*. The flesh of this fungus could be split apart with membrane still intact, which helps to tell it apart from other similar species.

It was approaching midday, when Jackie kindly explained to the rear group the difference between Bird's Foot Trefoil *Lotus corniculatus* and Greater Birdfoot Trefoil *L. pedunculatus*. The latter prefers wet ground and has a hollow stem. Jackie also pointed out an abundant cover of Bugle *Ajuga reptans*, and showed the difference between two species of *Alchemilla*: Smooth Lady's Mantle *A. glabra* being almost hairless, while Pale Lady's Mantle *A. xanthochlora* is hairy on the stem and underside of the leaves.

During lunch the party watched a Hawker Dragonfly tentatively identified as Common Hawker *Aeshna juncea*, and David mentioned that the front group had heard calls of Jay and Buzzard. In the woods nearby there was a nice specimen of *Hypholoma*, identified by Mary as *H. marginatum*. Right at the edge of the path before the bridge there was a *Peziza*, probably *Peziza badia*.

After lunch, the group continued along the path and encountered some nice Ceps *Boletus edulis*, plus *Amanita excelsa*, *A. vaginata* (commonly known as The Grisette), *Postia caesia*, *Heterobasidion annosum* (strongly smells of paint), *Polyporus leptocephalus* with black base, two big *Pluteus cervinus* on rotten Sycamore wood, and a Galerina on litter. Mary also found *Gloeophyllum sepiarium* – a bracket fungus with a maze-like rusty-brown underside and a felty top.

At this stage the rear group almost got lost but was helpfully beckoned on by Lyn, who provided a link with the front party. A view-point here offered some good views of Lochore and an area of mine waste overgrown by Larches. Apparently, the front group had also had the pleasure of watching a Kestrel.

At the stop David showed a specimen of *Chalciporus (Boletus) piperatus*, commonly known as The Peppery Bolete, earlier picked in the woods. Nearby, Ena demonstrated the characteristic M on the thorax of a Larch Ladybird *Aphidecta obliterata* resting on the bench.

Shortly after the stop a discussion occurred about the identity of a barely accessible tree on the edge of the nearby woods. David managed to negotiate a difficult series of obstacles, including brambles, nettles and remains of timber, to prove that it was a Hornbeam *Carpinus betulus*. This part of the route had an interesting mix of habitats, with lots of butterflies mainly Peacock's *Inachis io*, plus some Red Admirals *Vanessa Atalanta*, sunbathing on the open ground, and on semi-aquatic vegetation in the ditch. A variety of Sedges was found there, with *Carex demissa*, *C. panacea*, *C. leporina*, *C. sylvatica*, *C. lepidocarpa*, among others.

As the group approached the remains of the bing, a quick detour was made to listen to a tits' concert and admire an under-storey of Enchanter's Nightshade *Circaea lutetiana* under big Larches. Janet tried to identify the Tits, but they were rather elusive. Back on the path Dorothy explored the structure of *Phleum*'s inflorescence, while Jackie drew attention to more plants in the ditch. She dug out a Bulbous Rush *Juncus bulbosus* to demonstrate the characteristic bulbous base, and also showed some Fen Bedstraw *Galium uliginosum*, characterised by a rough stem and pointed leaves with backward-pointing prickles. The multitude of Butterflies here was accompanied by bumblebees, in particular *Bombus pascuorum*, and its parasite, a Field Cuckoo Bumblebee *B. campestris*, with a similar colouring.

Once again, Jackie drew attention to a number of interesting plants, including Northern Dock *Rumex longifolia* with no warts on its fruits, but otherwise similar to Broad-Leaved Dock *R. obtusifolia*, the square-stemmed St John's Wort *Hypericum tetrapterum*, and Silverweed *Potentilla anserina*. On the right side of the road beyond the ditch there were numerous Alders, and at least one interesting Willow *Salix viminalis*. On the other side there were Field Horsetail *Equisetum arvense*, Thyme-leaved Speedwell *Veronica serpyllifolia*, and Common Figwort *Scrophularia nodosa*. The fungi there included a *Psathyrella* sp. and The Miller *Clitopilus prunulus*, with a mealy smell. Jean emerged from the woods with another set of fungal finds, including *Piptoporus betulinus* and *Phlebia cervinus*.

Eventually the path approached the woods, and soon returned to the car park. All in all, a very nice outing!

Acknowledgements: The text of this article has been edited for brevity, but the original version is available from Vladimir Krivtsov. Jackie Muscott, David Adamson and Mary Clarkson are kindly thanked for their helpful comments on style and content.



LARCH LADYBIRD (not so big!)

Portmore Estate and Loch

Date 10th Sept 2011
Leader David Adamson

Although Andrew Gilechrist led a group round Portmore Loch a few years ago, I do not think the Society had previously visited the policies of Portmore House itself. Only eight were present on this occasion. The rain clouds that floated on a warm southerly wind probably deterred several of those who had flirted with the idea of attending. They missed a surprisingly good outing.

Portmore is not an ancient place name. The earls of Portmore, who seem to have been based in the south of England, acquired the lands in the eighteenth century and gave their name to the estate and loch. Portmore House dates from the nineteenth century, and its paths and driveways are lined with towering trees. Beneath these trees we found an abundance of woodland fungi in all their colourful splendour. There were five species of Amanita, and at least as many kinds of Tricholoma, Russula, and Boletus.

We emerged at the north end of Portmore Loch after a stroll through natural mixed woodland, home to jays. Wheatears danced on the reservoir wall and herons flew clumsily across the water. The fishermen's bothy by the loch car park has gone, replaced by a large modern chalet that is set among birch trees on the west bank. However only one boat was on the water today. On the east side of the loch is a patch of devil's-bit scabious, and here we found carder bees, satellite moths and a small copper butterfly.

After lunch our path led south, through sheep-grazed hill pasture, towards Boreland Farm . This habitat was rich in waxcap fungi, including the pink *Hygrocybe calyptraeformis* and dull orange *H. pratense*. Damp patches were decorated with the white flowers of Grass of Parnassus. On a thistle was a small bumble-bee resembling the common garden bumble-bee. From its short face I identified this as *Bombus jonellus*, an uncommon species in this area.

Portmore was good to us in one more way; it provided a crop of chantarelles that we plundered eagerly. The meeting ended in civilised fashion with a cup tea in the comfort of the Pine Tree Cafe.

David Adamson

WINTER TALKS

22nd February 2012

Birds of the Esk Valleys

Neil Grubb

Neil Grubb, a Cardiologist working in Edinburgh, spends much of his spare time watching, working with and filming natural history in the Lothians. He has created a channel on the web called Roslin Nature which illustrates his film-making work and previews his new projects. Neil has been making wildlife films since 2006, three to date, each taking two years to produce. The films are all made for the general public, to show wildlife in its local environment and to educate and entertain.

Neil described the process of making a documentary; the challenge of leaving a warm house and his family at all times of day and night, in all weathers, simply to catch one moment; recording the sounds; researching and identifying background music and musicians (with music composed by Dmytro Morykit on Oasis); and putting this all together, taking many hours of editing to make the film. His enthusiasm for and enjoyment of the challenge and how it afforded a much greater appreciation of the work of professionals was more than evident. We were delighted to have the opportunity to see Neil's third wildlife film, *Oasis* (2011), which is also his first full-length documentary of 27 minutes duration.

The viewer is taken on a seasonal journey up the River Esk from its outflow to its source, beginning in January with Waxwings during an irruption year and Starlings, sometimes in their thousands, seen flying in tight formation before funnelling into their night-time roost. Mount Lothian near the South Esk source is home to winter-visiting finches, with large mixed flocks of Chaffinch, Brambling and Linnets. In Roslin Glen on the North Esk tall, mature Oak and Scots Pine line the steep banks, where Peregrine nest in a hollow recess high in the sandstone cliffs and nearby a pair of Ravens in a similar spot. Both early breeders, they lay eggs in early February.

A few decades ago life was absent from the Esk river system, poisoned by the effluent from the many mills along its banks. Now that it's clean, many old residents have returned, such as Kingfisher and Dipper. Springtime sees the arrival of Bluebells, dawn chorus and summer migrants, with Chiffchaff one of the first to arrive, followed by Wood Warbler, Redstart and Spotted Flycatcher. Nuthatch has bred in the Lothians since 2005 and Roslin Glen was one of the first sites. Great-spotted Woodpecker occur here and Green Woodpecker too, the Lothians being on the edge of the latter's northern range in Britain.

Our final stop is on the upland moors of the river system at Toxside Moss and Mount Lothian. Conifer woods and scrub are home to summer breeding warblers such as Sedge Warbler and Grasshopper Warbler. Upland woods are also home to Lesser Redpoll and away from the plantation Whinchat are ground nesters, visitors from Central Africa.

The film ended, Neil then answered a number of questions. To conclude, he was warmly thanked for coming along and showing us his most interesting film.

Joanie McNaughton

Beavers are the second largest rodent in the world. They are semi-aquatic and have specific adaptations for this lifestyle. Particularly when swimming they may be mistaken for other species such as Coypu, Otter and Musk Rats. Their size, teeth and tail are distinctive features. The two species of Beavers behave and look very similar. Aquatic adaptations include sense organs set high on the head so they can be engaged whilst swimming, constricting nostrils, ear flaps and additional hair in ear canals, small extremities and lack of external sex organs to reduce heat loss, webbed hind feet with strong associated leg muscles to power swimming, dense fur and specific grooming claw to keep pelt water proof and parasite free. Beavers are completely herbivorous, possessing specialised dentition and highly dexterous forepaws to assist feeding. They are mainly found around slow moving, fresh water bodies, and leave very obvious and distinctive field signs.

Eurasian Beavers *Castor fiber* are distributed throughout Northern and central Eurasia, current population is estimated about 1 million. This species was nearly hunted to extinction (about 1,200 individuals late 19th century). Hunting restrictions and active conservation measures mean beavers have recovered throughout much of their former native range. Large populations of American Beaver *Castor canadensis* are spreading through Finland and Russia, and are a wildlife management concern. Eurasian Beavers lived in Britain from Pliocene times. Evidence of Beaver activities such as lodge-building and Beaver-felled wood have been revealed in a number of archaeological digs. More recent evidence of human exploitation of Beavers is found throughout Britain, where they were killed for fur, meat, tools and decorations.

The Scottish Beaver Trial (SBT) was granted a licence to reintroduce 4 beaver families in a site in mid-Argyll. SBT is a partnership project between the Royal Zoological Society of Scotland (RZSS) and Scottish Wildlife Trust (SWT), hosted on Forestry Commission Scotland (FCS) land. This trial reintroduction has specific aims and strict licence conditions. Scottish Natural Heritage (SNH) co-ordinate the independent monitoring, with all reports available on the SNH website. Feasibility studies have been undertaken for England and Wales. RZSS has developed a range of Beaver research projects which mainly focus on beaver health and welfare.

The vast majority of human-Beaver conflicts occur within the first 20m of habitat surrounding fresh water bodies. A range of management solutions have been developed to deal with these potential conflicts. Ultimately any management solution should be relevant, reasonable and cost effective. If we really wish to see Beavers back as one of our native species this will take cooperation and compromise between landowners and conservation bodies. As Beavers have been absent for about 400 years education and experience are required so we can learn to live with and manage this species. The benefits of Beaver presence are increased biodiversity, dynamic and more complex habitats, water retention and management, trapping of silts and nutrients, and wildlife tourism.

As we pass the half-way point in the trial, the Beavers display a full range of normal behaviours and activities, including lodge and dam building, foraging and breeding. Some deaths and dispersals have also occurred. Scientific monitoring will be completed by June 2014; SNH will present this data to the government who are expected to make a decision on the future of all beavers in Scotland by 2015.

Roisin Campbell-Palmer; SBT Field Operations Manager/RZSS Beaver Project Leader:

26th September

Whales, Dolphins & Porpoises of the Hebrides

Gemma Paterson

Gemma Paterson is the Education Officer at the Hebridean Whale & Dolphin Trust, based on the Isle of Mull. In this post since March 2008 she is now involved in many aspects of the Trust's work including outreach, fundraising, attending to stranded animals and trips on Silurian, a Trust-owned yacht. The Hebridean Whale and Dolphin Trust (HWDT) is dedicated to enhancing knowledge and understanding of Scotland's Whales, Dolphins and Porpoises (cetaceans) and the Hebridean marine environment through education, research and working within Hebridean communities as a basis for the lasting conservation of local species and habitats. Gemma described each of the main marine mammals found in west Scottish waters, using visual and acoustic identification.

There are two primary local water masses off the west coast of Scotland: relatively warm Atlantic waters and cooler Coastal Current waters moving north from the Irish Sea. Biodiversity indices show that species diversity is lower in the area which is dominated exclusively by a single water mass from the Irish Sea (in the area south of Mull and around Islay and Jura). Diversity is highest where Atlantic and Irish Sea waters are actively mixing or are extensively mixed. This suggests that oceanographic features are a strong indicator of cetacean diversity on the Scottish west coast. This can be extended to basking Sharks, which are seen in great numbers in hotspots, such as the one identified off the Isle of Tiree, where plankton bloom in dense patches at sites of tidal convergence. Fewer than 40 Bottlenose Dolphins live in the waters of the Inner Hebrides, but they range from the Kintyre Peninsula to Skye. Another more localised population of approximately 12-15 animals is found in and around the Sound of Barra in the Outer Hebrides. Patterns of Minke Whale sightings have been changing, maybe because of the availability of the small schooling fish on which they feed. Over recent years, HWDT observed fewer minke whale sightings in core survey areas, whilst numbers of basking Sharks appeared to follow an upward trend. However, this trend reversed in 2011, highlighting the importance of long-term studies. The west coast of Scotland is one of the most important Harbour Porpoise habitats in Europe, but there are certain areas around Mull, the Small Isles and the Sound of Jura which are feeding hotspots. Harbour Porpoise appear to favour deeper channels or basins close to shores. Through collaborative research with Dr. Andy Foote, the Trust has discovered there are just nine Killer Whales resident in Hebridean waters. It is likely that they don't mix with any other North Atlantic Killer Whale populations (such as those seen around Shetland and Ireland) although their ranges overlap. This group does not appear to be reproducing and is therefore in a highly vulnerable state.

Much of the understanding of Whales, Dolphins and Porpoises in Scottish waters comes from HWDT's Research Programme, which is complimented by their Community Sightings and Strandings Network. Members of the public are encouraged to report their sightings of marine mammals via an online form. Reports of beached or stranded individuals are welcomed and HWDT will assist in re-floating these, or take photos, measurements and samples of the dead individuals to send to the Scottish Agricultural College (SAC) for analysis.

The Trust has worked with schools since 1994 and has put HWDT at the forefront of marine environmental education on the west coast of Scotland. An education programme is delivered in three main locations: on the yacht *Silurian*, on the beach and in schools. Students are actively engaged in learning about cetacean research and investigating local marine life. Feedback from schools has indicated these learning experiences are very powerful for students. Funding from Awards for All was made available in 2012 to young people from disadvantaged backgrounds who were invited on research trips under sail on Silurian around Mull.

Gemma concluded by acknowledging the Trust's main funders, SNH, Heritage Lottery Fund, HIE, Biodiversity Action, Earthwatch Institute and WWF. Furthermore, she highlighted ways in which people can get involved with, and support, HWDT including membership, adopting a Dolphin, volunteering or indeed joining a research trip on Silurian.

Joanie McNaughton (edited by Gemma Paterson)

24th October

Scottish Plants Project
Heather McHaffie

Heather originally trained as a primary school teacher and taught for many years, before pursuing her lifelong enthusiasm for plants and changing her career to work at the Royal Botanic Garden Edinburgh (RBGE). This talk provided an insight into her role as the Scottish Plant Officer at RBGE and demonstrated the huge range of projects that she has been involved in.

A large part of Heather's plant conservation work has centred on the Target 8 Project, which is based on the Global Strategy for Plant Conservation (GSPC). Target 8 aims to develop ex situ conservation collections for 75% of endangered or vulnerable plants, with 20% available for reintroductions or recovery programmes. There are 170 threatened Target 8 Scottish plant species listed and Heather discussed the challenges involved in collecting wild seed from these rare species. She stressed the necessity for licenses from Scottish Natural Heritage (SNH) and the requirement for landowner permission, the importance of timing, the ever changing weather and essential support from volunteers. The collected seed has been cultivated in a shade tunnel at the RBGE and the plants have provided an extremely useful resource for teaching, as well as providing material for other projects such as reintroductions, seed for the Millennium seed bank, research at the James Hutton Institute and public displays in Scottish botanical gardens.

Heather has also been involved in the UK Barcode Project which began at the National Botanic Garden Wales, where the characteristic pattern (barcode) for a selected part of DNA was identified for all of the native flowering plants in Wales. This developed into a UK project, with the overall aim of identifying a DNA barcode for every native plant in the UK. Heather's role at RBGE, supported by volunteers, has been to collect DNA samples and voucher specimens for species restricted to Scotland. Field collections involve placing a small amount of leaf material into silica gel to dry the plant material as fast as possible and preserve the DNA. It has also been possible to extract DNA samples from the herbarium specimens at RBGE, as well as some of the rare Scottish plants that are growing in the shade tunnel as part of the Target 8 Project.

Other conservation projects Heather has been involved with include the Arran Sorbus Project. This was a collaboration with RBGE, SNH and NTS to conserve the three *S. microspecies* identified on Arran – *S. arranensis* (vulnerable), *S. pseudofennica* (vulnerable) and *S. pseudomeinichii* (one tree – critically endangered). Heather also talked of her involvement in a few reintroduction projects of rare Scottish Plants, for example, the vulnerable *Polygonatum verticillatum* (Whorled Solomon's-seal), the UK BAP species *Salix lanata* (Woolly Willow) and the endangered *Woodsia ilvensis* (Oblong Woodsia). The reasons for these reintroduction projects were discussed, as well as the legislation, the practicalities of growing these rare species and the importance of seed establishment in the wild as a measure of project success.

Heather finished with the promotion of the range of plant identification courses she teaches on, including the RBGE Practical Certificate in Field Botany, the Fern Identification Course at Kindrogan and her Plantlife workshops.

Katherine White

28th November

**Coconuts & Conservation
Endangered and Endemic Species of Aride**
Rory Crawford

A Glaswegian born and bred and a graduate of Marine and Freshwater Biology from the University of Glasgow, Rory has worked for the RSPB since 2007. He is now RSPB Scotland's Seabird Policy Officer. In 2008 he spent three months on the island nature reserve of Aride, in the Seychelles.

The Seychelles' most northerly granitic island and 4° south of the Equator, Aride lies on the Continental Shelf separating Africa and India. The island is only one mile long by half a mile wide, but supports a huge diversity of life both on land and in the sea.

The first account of Aride's history, written in 1787 by Jean-Baptiste Malavois the then French Commandant of the Seychelles, described the island as 'no more than a pile of rocks with a few bushes'. Some years later, interest in the island centred on exploitation of the large seabird population and a huge numbers of eggs were collected and sold. In 1954 harvesting of birds and eggs hit a peak, with 225,000 eggs sold in one year. Percival Wright, the Irish naturalist, visited in 1868. The first naturalist to explore Aride, he gave his name to a skink and to a small tree, Wright's Gardenia, which grows naturally only on Aride. Marianne North, a botanical artist, visited in 1883. After large-scale destruction of the native vegetation and recognising the biological importance of the island, Aride was finally sold by its owners, the Chenard family, to Christopher Cadbury of the Royal Society of Wildlife Trusts in 1973. It was leased back to a Seychellois NGO, Island Conservation Society ("ICS") in 2003, and in 2007 ICS took full ownership of the island. ICS and James Cadbury, an Honorary Member of ICS UK, supported Rory's stint on the island. Now a nature reserve, there are two wardens, four rangers and two volunteers living on the island.

Today there are over one million breeding and roosting seabirds. The island has the densest population of lizards in the world. The fertile soil (from bird droppings) supports pumpkin, tomatoes, bread lamar and pineapple. The introduced trees on the plateau such as Coconut have been removed and replaced with native trees.

Rory described some of Aride's success stories, some birds having been either almost wiped out or were in serious decline - Seychelles (S.) Warbler, S. Magpie Robin, S. Fody, S. Sunbird and S. Blue Pigeon.

This is the biggest breeding colony in the world of the Lesser Noddy with 186,000 pairs. Other breeding birds include 12,000 pairs of Brown Noddy, 300,000 pairs of Sooty Tern and 6,000 pairs of Fairy Tern.

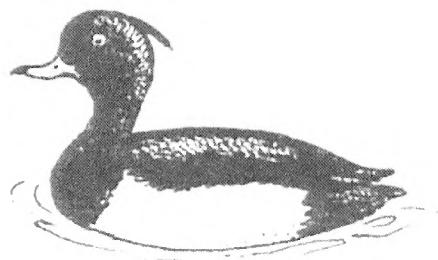
The White-tailed Tropicbird nests here and Aride is the only island in the granitic Seychelles where only a couple of pairs of Red-tailed Tropicbird nest. The pterodactyl-like Frigatebirds, both Greater and Lesser, nest on neighbouring Denis and come to Aride to roost. Amongst other seabirds occurring here are Audubon Shearwater (98,000 pairs) and Wedge-tailed Shearwater (32,000 pairs). Whimbrel and Curlew are migratory; Turnstone, Grey Plover, and Sanderling also occur here. Moorhen is thought to be introduced, probably by sailors for food. It has adapted itself with longer legs and shorter wings as it spends more time on land. Vagrants include the Crab Plover which has stilt-like legs and a tomahawk beak to smash.

Giant Millipede, the largest millipede in the world and harmless, is the food of the Magpie Robin. The Bronze-eyed and the Green Day Gecko occur, together with two species of Skinks, S. Skink and Wright's Skink. The Horned Ghost Crab builds burrows in the sand. The S. Fruit Bat has a breeding colony on Aride. There are 80 nesting Hawksbill Turtles, the predominant species on Aride, and Green Turtles also nest here.

With a 200m protected zone around the island, no fishing is permitted. Still diverse despite the major global coral-bleaching event about 15 years ago, when the water temperature rose killing the symbiotic algae, many tropical fish occur including Moorish Idol, Tomato Grouper and the Powder-blue Surgeon Fish. Blacktip Reef Shark, Nurse Shark and Great Grey Reef Shark all occur in the sea around Aride. Humpbacked Whale can be seen en route to Antarctica and attempts are being made to collect skin samples for DNA.

After questions, Rory was thanked for giving up his time and for his fascinating talk.

Joanie McNaughton (and edited by R Crawford)



ACKNOWLEDGEMENTS

We thank everyone who has contributed to this year's Journal - those who wrote articles, sent in Observations and excursion reports; and those who took photographs. Without our members' contributions there would be no Journal.

The photographers this year were Joanie McNaughton, Neville Crowther and Tom Delaney.

LIBRARY

The resources for study and identification, available from the library are being reviewed to ensure access to the most up to date information via a range of resources, not limited to print is available to members.

Pauline King

Other Society resources are also being reviewed at present. For more information speak to a Council member.

AND FOR 2013

If you go on Excursions please offer to do a write-up for the Excursion Committee. It needn't be long; they will advise you about length etc.

Most of us are out and about and seeing things of interest. Let's have more observations and short articles.

Drawings and ideas for longer articles would be very much appreciated too.

As would photographs.

Let them flood in!to the website

enquiries@edinburghnaturalhistorysociety.org.uk

or to a member of Council.

